

THE ACADEMY.

A Record of Literature, Learning, Science, and Art.

"INTER SILVAS ACADEMI QUÆRERE VERUM."

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No. 81.]

REGISTERED FOR

WEDNESDAY, OCTOBER 1, 1873.

TRANSMISSION ABROAD.

[Price 6d.

General Literature.

Alcestis. A Novel. 2 vols. Smith, Elder, and Co.

A MUSICAL English novel is rare, a clever English musical novel rarer yet; *Alcestis* as both musical and clever deserves hearty welcome. Despite more than a reminiscence of *Consuelo* in general tone, choice of time and place, and conception of the character of the heroine, this story is fresh and original, and indicates a hand vigorous if somewhat untried. German life and German music being the subject matter, it is natural that the manner of German musical romances should have unconsciously been assumed by the author of *Alcestis*: but the German colour reaches even deeper than this; the style reads like a spirited translation, the sentimental *timbre*, the picturesque mode of presenting scenes in the drama are thoroughly German. However, if this foreign element be a fault, it is also a charm, and imparts a certain piquant flavour to the book.

The artistic career, speaking now of music and the drama, affords much more material for a powerful novelist than is commonly used by English writers; possibly because the "artist" is a product not wholly understood in England, scarcely one of those natural growths of the soil whose origin and development are well known and classified. The artist as evolved out of the brain of most novel writers among us (with a few honourable exceptions), is either a delicate being fed on rose leaves, exercising any amount of power as actor, singer, virtuoso, by some false prerogative without need of work, ever ready to expand seraphic wings and fly out of sight of the adoring crowd: or else a rather coarse, passionate individual, a "woman-killer" or a Circe, given to running away with other people's property in the form of husbands, wives, or purses, loud talking, brilliantly revolving amid glare of foot lamps and acclaim of clapping palms. The author of *Alcestis* merits gratitude for giving us something nearer nature. Josquin Dorioz, violinist and composer, Elisabetha Vaara, vocalist, are, thank Heaven, healthy man and woman, neither animals nor seraphs, but human creatures, with all infirmities that flesh is heir to, yet akin to the gods through the possession of a divine genius, sustained by loyal labour and devotion: true artists these—who find in art strength for sacrifice, comfort in trouble, satisfaction to the hunger of the soul.

The plan of *Alcestis* reveals so much of the purpose of the book that I will without apology give it somewhat in full. Josquin Dorioz, né Gasparein, son of French artist mother and aristocratic Viennese father, now deprived of both parents, escapes from the house of bondage, represented by the family mansion in Vienna, and fiddles his way to freedom and North Germany on the precious Straduarius inherited from his mother. Arriving hungry but aspiring at Dresden, he is taken under the protection of Nodin, buffo tenor, and Elisabetha Vaara, herself once rescued from beggary by Nodin for love of her superb voice. Elisabetha and Josquin become pupils together in the choir of old Adolphus Hasse, then in full swing of glory as composer of the severe contrapuntal school, untainted by romantic heresy. Elisabetha pure, "responsible," noble hearted (very like our old friend *Consuelo*), ever steadfast to the high call of her art, becomes a polar star to the career of Josquin, who is the fiery, impulsive, sensitively tempered creature to be expected from his inheritance of Viennese and French blood. To Elisabetha, to the ideal which she upholds and strives after, the erratic Josquin returns out of the temptations of popularity, passion, and pleasant ease. The young violinist is taken up by Faustina Bordoni, Hasse's wife, a faded star of operatic celebrity, now beneficently shining on rising lights; through success obtained in her salons, he becomes pet *protégé* and chamber musician to Count von Lichtenberg, a musical dilettante of the first water, refined to the verge of weakness, *blasé* of society, politics, religion, a seeker in art of the "illusions that shall carry him through the prosaic staleness of life." The Count has a niece, Cécile, irresistible in loveliness, before whom the heart of Josquin, artist-like responsive to beauty, melts into worship: there is also a pale abbé named Paradies, who writes Greek plays, and projects under the inspiration of Josquin's violin the scheme of a drama with Elisabetha as heroine and Dorioz as composer. Josquin, bound with gilded fetters of elegant conventionalities and delicious flirtation, and half content with servitude, grinds away obediently at composition and performance, though now and then the artist-conscience rebels, and bids him break away to tread again the "solitary path of genius," where Elisabetha beckons upward. When Dresden is beleaguered by Daun's army, Josquin Dorioz is

away with the Lichtenbergs in Italy, and afterwards at Vienna ; here increasing admiration easily won, Cécile growing kind, illusions manifold and brightly coloured threaten to sink the young artist into the mere popular player : his creative faculty, the jewel of his genius, dims, Elisabetha and the noble artistic career shine faintly in the background. But one night Gluck is in Vienna, the *Orpheus and Eurydice* is given at the opera house. Josquin, his heart in his ears, feels the call of the master ; his soul rises up to meet the voice which summons him—the artist, to fulfil his mission ; in the flood of fresh, strong music his soul receives baptism into renewed effort. A report that Elisabetha Vaara is playing out the last week of her performance at Dresden in one of Hasse's operas, gives Josquin the conclusive impetus ; he starts for Dresden at once, and arrives at the theatre the closing night, in time to see the friend of his youth triumphant in the grand result of single-hearted devotion to her art.

Now comes the tragedy of our story. A period of quiet work and progress ensues, in which the artist pair work side by side ; Josquin organises people's concerts of good music under Elisabetha's influence, and begins to work at his first opera "Alcesteis," for which Paradies furnishes the libretto, and in which the Vaara is to be the heroine. The acceptance of the opera at the Dresden theatre will lie in the hands of Hof-Intendant Plauen, for old Hasse, now out of fashion, can do nothing for his pupil. But Plauen is in love with Elisabetha, and sees a rival in the composer of "Alcesteis." Renewed love-passages with Cécile von Lichtenberg end in bitter disillusion and despair, and broken-hearted Josquin, further crushed by the refusal of his opera, collapses ; the sensitive body gives way under the strain of mental anguish. At this crisis Elisabetha, whose friendship has been troubled by jealousy and the consciousness of un-rewarded love, devotes herself to her prodigal. She buys the acceptance of Josquin's opera with the sacrifice of herself, and privately becomes the wife of the Count Plauen on condition of the immediate performance of "Alcesteis" and concealment of her marriage till Josquin shall have left Dresden for Italy : if her friend is to die he shall at any rate know one great joy first, and the artist-soul which has been bound up so long with her own shall achieve reward. So "Alcesteis" is performed, and Elisabetha, throwing out her soul into the part which has for her an awful significance of sacrifice, crowns love with thorns, as the house rings with plaudits for the happy Josquin, all unconscious of the price paid for his triumph.

The motive of *Alcesteis* seems to be the aspiration of the true artist in contest with circumstance and temptation after a life harmonious with the ideal of his art : a life in which genius shall develop uncramped by conventional taste or exigencies of a struggle for bread ; in which joy and pain shall be as golden harpstrings for the musician's fingers, and existence another word for devotion and fruition. But the artist finds—what Josquin found ; a dilettante world in love with itself, ready to bid Apollo turn lacquey ; or what Elisabetha found ; a suffering world that will not let the tender woman-heart satisfy itself with song. This leading purpose of *Alcesteis*, if I read it aright, is finely brought out ; yet the plan of the story is better conceived than managed. The main point of the plot is Josquin as composer helped to the success of his supreme effort by that sacrifice of Elisabetha, to which even the title and the motto point. Yet this climax is hurriedly brought about at the end of the novel, a quantity of detail being compressed into the previous chapters to work up to the grand *coup*, which falls a little flat after all. True as this management may be to the natural order of circumstance, it

is artistically, I think, a mistake. The writer has like the painter to bring out his strongest motive even at sacrifice of detail and surrounding ; to exaggerate gloom, like Rembrandt, that light may be more light ; and the novel writer, working more artistically than a biographer who honestly records the succession of circumstances, must dwell upon the events that have the highest spiritual significance, thus presenting the story of a life as it would lie in the memory. Moreover from a musical point of view Josquin is too half-and-half a personage ; he hovers between composer and virtuoso with an indifference that makes the character ring false. The creative spirit is always *master* in an artist who possesses the divine gift in any high degree, and the burning desire to produce some great work must have shaped and coloured Josquin Dorioz' life much more strongly than appears. Possibly the author of *Alcesteis* would imply that absolute freedom and sympathetic surroundings are indispensable to the creative spirit, and so makes the hero feel no overpowering impulse to produce great things until free of dilettante patronage. Yet Haydn and Mozart wrote divinely while in court service, although bound to supply their due share of what Wagner aptly calls "tafel-musik." But where artistic power is so abundantly displayed it may seem captious to object to such finely strained failings. If the author of *Alcesteis* betrays amateurishness it is of the best culture : music does not often obtain so competent a biographer.

Space is barely left to descant upon the delightful studies of character, quite a little gallery of portraiture, or the fresh descriptions of Dresden, which serve as backgrounds for the *dramatis personae*, the quaint nooks of the old town, the "Boccaccio gardens" of the villa, or the perfumed salons, like Menzel's pictures of Sans Souci, where stately ladies recline resplendent under the wax lights, and Frederick supremely pipes among his fiddlers. The general reader, on whom the musical motive of the story is perhaps wasted, will yet find plenty to arrest and charm in *Alcesteis*. The best compliment to the author may be to express the hope of seeing more work from the same hand in a field so little exhausted as musical romance.

A. D. ATKINSON.

Snoilsky's Poems. [Sonnetter af Carl Snoilsky.] Stockholm.

We have repeatedly had occasion in these columns to regret the poverty of original Swedish literature in our own time. The struggle of modern social life against the art of poetry has nowhere in Europe been more successful than in the Sweden of the last thirty years. It may be said that the poetry of that country has never risen much above mediocre merit ; that there has always been something provincial, something local in its character ; but at the same time it has had a consistent history, and took a definite national form long before German poetry, for instance, had emerged out of chaos. Wherever there exists a perfected language with a long range of literary traditions, there is always the chance that a world-wide writer may appear, full-fledged, at a moment's notice. No doubt Sweden is yet to have its great poet, no dilettante like Atterbom, no walking gentleman like Tegnér, not even an inspired minstrel of the border like Runeberg, the largest poetical figure at present on the Swedish horizon, but some one like Ohlenschlaeger fifty years ago, or the Norwegian Ibsen now, who will force the literature of his country on the attention of Europe by the sheer power of individual genius.

Carl Snoilsky, let it be confessed at once, is no such gigantic apparition. He must develop in a startling and quite unexpected manner before he can be hailed as the poet of the future. But this thin book of his, a mere

pamphlet of fifty sonnets, claims our attention as being the very best poetical work that we have met with among recent Swedish efforts. Since Runeberg retired and the last spasmodic wails of the Tegnèrian school died away, two representatives of those opposite types have occasionally claimed the public ear. For some years B. E. Malmström gave out at distant intervals those charming pseudo-classical idyls that presented the very best side possible of the Tegnèr influence. From distant Finland, Zachris Topelius, pupil and friend of Runeberg, continued the style of his master without force or originality, but still healthily and freshly. It is now several years since Malmström died, and his elaborately artificial verse, delicate as it is, will fill no place in the history of poetry, while the songs of Topelius become, year by year, more and more out of sympathy with new phases of thought and feeling. It may be that Snoilsky is the Malmström of his day; at all events there is an intellectual freshness and a delicacy of workmanship that has not been met with in Stockholm since the days of Malmström. In the dearth of poets, it seems that by force of these sonnets alone Snoilsky must rise to the first rank among his contemporaries.

These poems are the work of a man, presumably young, who rides on the crest of the intellectual wave of his day. They are surprisingly modern, and realistic to the point of prosiness. The author's aim—quite a new one for a Swede, by the way—is to take a subject that fills public attention at the moment, and to clothe it with Heinesque pathos and a delicate veil of verse, and set it up as a poem. Sometimes he is very successful; sometimes the ugly thing is too strong for him, and leers out unpleasantly through the shadows and the point-lace. For instance, there are four sonnets entitled *La Pétroleuse*, which are intended to convey a vivid satirical picture of the horrors of the French commune, but the effect is clumsy and tame. These four sonnets, too, offer a good example of one of Carl Snoilsky's greatest faults, a tendency to enrich the Swedish language with a mass of foreign words dragged in unchanged. In the first of these, the unfortunate woman is addressed as Lutetia's Venus, and a little lower down we get such rococo forms as *chassepot-kulan* and *petroleum-effekt*. This latter barbarism ends a sonnet, truly a flat and unprofitable close.

But when Carl Snoilsky condescends to write pure Swedish, and to undertake subjects of a genuinely poetical character, he is often very charming. He seems to have read contemporary poetry to some avail; there are not wanting traces of Victor Hugo's influence, and he is a direct disciple of Heine, though not at all in the direction of the latest German writing. Occasionally we ask ourselves if he has not studied Swinburne. He is not a poet of strong objective tendencies, but rather a reflective and cultivated man of letters. He invites us, not to the mountain-tops, but into his park, where among the regular avenues and close-shaven lawns we find flowers from southern lands and statues half hidden in the leaves. In spite of all his would-be realism he is a dreamer, and the best that he can do is to show us a cloud-reflection of the great battles of the modern gods of thought. He sits in his marble portico, with the murmur of the leaves around him, and the birds bring him news of what is stirring in the work-a-day world. This is not great poetry, but it has delicate and valuable qualities of which Sweden may be proud. We hope to see more important works from this new poet, and for the present we are glad to welcome him.

EDMUND W. GOSSE.

LITERARY NOTES.

Mr. J. P. White's family have decided to publish (J. Russell Smith), after a delay of five years, the *Lays and Legends of the English Lake Country*, to which he devoted all his leisure

up to his death in 1868. The poems recall Scott when he is least animated and the later stiffer manner of Wordsworth when he lusted after double rhymes; still there are some—e.g. “Pan on Kirkstone,” and “Laurels on Lingg Moor”—not without literary value; all have the interest which results from the union of fervour, clearness, and refinement. This refinement is of course quite compatible with the absence of such cultivation as goes with critical insight, of which there is a plentiful lack in the voluminous notes, which however contain some interesting details (especially those to the “Church in the Mountains”); but there is a great deal too much of mere genealogy, and, though this is not the writer's fault, it is too apparent that local tradition has become too confused and incoherent to yield much inspiration. Still, with all its drawbacks, the book is one that a tourist should be glad to find in a Lake Country inn, and perhaps this is all the praise the author would have deserved.

Mr. Pearson has become possessed, under circumstances which are not explained, of the original MS. of Coleridge's *Osorio*, rejected by Sheridan in 1797, and “preserved from destruction by one of those strange and unaccountable freaks of chance or fortune which seem little short of miraculous.” Such an observation piques a curiosity which it might have been well if possible to gratify; it might have been well also to give a parallel table of the names of the characters in the two editions of the play, as most of them were altered when the play was performed in 1813 at Drury Lane and had a run of twenty nights under the title of *Remorse*. The omission at one point in the cottage scene of the second act has led the editor himself into some confusion, where he says, “Zulimez replaces Maurice, who is only alluded to.” Maurice, “the heroic Prince of Orange,” is “alluded to” in both forms of the scene, though he is only named in the later, where no confusion could arise between him and the hero's faithful Moresco attendant, who was named Maurice in the first draught of the play. Still it is ungracious to look a gift horse in the mouth, and Mr. Pearson has given us means of instituting a very interesting comparison between Coleridge's work in 1797 and his work in 1812.

In its original form, *Osorio*, like Wordsworth's *Borderers*, written in the same year, manifestly owes its inspiration to Schiller's *Robbers*, though *Osorio* is the more independent and ingenious work of the two. Indeed it is less absurd and more poetical than its original; but after all it is less powerful; moreover the naïveté and simplicity for its own sake in which the self-indulgence of Coleridge at one time out-heroded the austerity of Wordsworth make the diction often tame and once at least ridiculous. Here in their authentic form are the famous lines about “dripping,” which were the only reason Sheridan is known to have given for rejecting the play he had encouraged Coleridge to write:—

“Drip! drip! drip! drip!—in such a place as this
It has nothing else to do but drip! drip! drip!
I wish it had not dripped upon my torch.”

In 1812 Coleridge had become a great religious philosopher, a great dramatic philosopher; he had profited by the plays of Schiller's manhood; he had acquired the “grand style” of the English theatre, the style which Lord Lytton's modesty led him to think had expired with Sheridan Knowles. As might be expected, the additions in *Remorse* are more important and characteristic than the omissions. The only one of consequence beside the well-known foster mother's tale is a spirited but incoherent scene where the inquisitor is captured, but respite until *Osorio* shall have been first despatched. In the published play there are important additions at both ends, intended to *afficher* a spiritual and dramatic purpose; there is a good deal of inflated writing, meant to raise the character of Teresa, the Christian heroine, who is pompously and elaborately withdrawn from the end of the incantation scene; and at all the important crises of the play the writing becomes more laboured and emphatic, and perhaps better suited to the stage.

The *Buda Pest Review* (*Buda pesti Szemle*), Nos. 2, 3, and 4, maintains the character of the first number (see *Academy*, vol. iv. p. 66). A large proportion of the space is given up to English, French, and German books and articles, which are

either analysed at considerable length or simply translated with but slight omissions. Of these we may mention Gregorovius' *Geschichte der Stadt Rom*, Leroy Beaulieu on Napoleon III., Cherbuliez on Lessing, and the *Edinburgh Review* on Grote's *Aristotle*. Among the poetical contributions are what seems a successful version of Burns' *Tam o' Shanter* by Arany and a translation of Tennyson's *Elaine* and *Ginevra* by Szász. We have among the original articles a review of Dóczy's translation of Goethe's *Faust*, in which extreme violence has been done to the genius of the Hungarian language, the translator being in fact a German, who presumes too much on a supposed mastery of Hungarian. Also two excellent historical contributions, one by Pauler (Gyula) on the conspiracy of the Palatine Wesselényi, 1666-1667; another by Szilágyi (Sándor) on the policy pursued by the Turks towards Transylvania, 1657-1686. The notices of Hungarian books are almost uniformly unfavourable; of non-Hungarian books we have intelligent and favourable critiques of Sayous' *Histoire des Hongrois*, and of Szaraniewicz' *Kritische Blätter in die Geschichte der Karpathen Völker* and *Die Hypatios-Chronik als Quellen-Beitrag zur österreichischen Geschichte*.

Professor Fryxell has just published the 41st part of his interminable *Studies in Swedish History*. The first part of this celebrated work appeared in 1823, and consequently it has taken the author exactly half a century to travel from the earliest times down to the year 1770. The new part treats of the intrigues with Russia and Prussia, and the internal struggles between the Moss and Hatt parties at court, under Adolphus Frederick II. (1765-1770).

The eminent Danish antiquary, Professor Warsaae, has just brought out a valuable little treatise, *Russlands og det skandinaviske Nordens Bebyggelse og ældste Kulturforhold*, the object of which is to prove that the earliest culture in the north of Europe came originally from Asia and North Africa, and that the movement of civilization since the beginning of the Stone Age has taken the same north-easterly direction.

We have received what is announced as the first volume of a complete edition of the *Tagebücher* of Fr. v. Gentz, edited by Fraülein L. Assing from the *Nachlass* of Varnhagen v. Ense. It only differs from the volume published twelve years ago, containing the very interesting *Journal politique* kept by the author in 1809 during the negotiations after the battle of Wagram, by the addition of 100 pp. of the Diary (also in French) kept in 1815 at Vienna and Paris, the substance of which is so uninteresting that we can scarcely regret the destruction of the original MSS. for the earlier years, or question the discretion which led Gentz to resolve on the abridgment of the whole. What is now first printed is a mere list of names and social engagements without either personal or historical interest.

The *Nation* (Sep. 11) gives a pleasant account of the ardour with which the students and professors of the "Anderson School of Natural History," newly located on the island of Penikese, have held their first summer session. Besides constant lectures from Prof. Agassiz and other able volunteers, the students (who are of both sexes) have every opportunity for practical work and independent investigation given them by the dredging expeditions of the yacht, lately presented for that purpose to Prof. Agassiz. There is room, we should think, for an institution of a like kind on the English coast.

Art and Archaeology.

Guida del Palatino, compilata da C. L. Visconti e R. A. Lanciani. Roma. 1873.

This little work deserves to be better known to scholars and archaeologists in England than appears to be the case. Although its primary object is to serve as a local guide-book to the recent excavations on the Palatine Hill, yet that site is so important, and the discoveries made there of late years

have thrown so much new light on the history of Rome, that a good account of them in any form should meet with immediate attention. The authors are two of the best local antiquaries in Rome. The Cavaliere Visconti, beside his hereditary claims to our regard, has a wide reputation; and Signor Lanciani, his pupil and friend, and secretary to the Archaeological Commission of the Municipality of Rome, makes it his duty to keep constant watch over all excavations and researches—a duty which he performs *con amore*, with remarkable activity and zeal. These two are joint editors of the *Bullettino della Commissione Archeologica Municipale* (*Academy*, vol. iv., p. 273).

The work before us is carefully and diligently compiled from the best authorities, and is entitled on the whole to warm praise. It has only one drawback, which is that the authors naturally see everything through the coloured spectacles of the local "Roman traditions," which are merely the conjectures of learned men of a few past generations, who had less opportunity for forming a correct judgment than we now have. The recent excavations themselves have upset many old opinions, and the leading principle of the modern science of archaeology, that of choosing historical types of each period, and comparing the details of all other buildings with such types, has upset several others. The authors before us, excellent antiquaries as they are in many respects, have not yet seen this, but can only run in the old grooves to which they have been accustomed: still, it is only here and there that the work is seriously affected by this failing, and on the whole it is a trustworthy and valuable guide.

They begin in a preliminary advertisement by showing that the whole of the Palatine is now for the first time restored to the public (with the exception of the part covered by the monasteries, which are not *as yet* disturbed), and to point out how much has been done on that ground since 1848. In that year the court of Russia began at the north-west corner by purchasing what was then a vineyard, called the Vigna Nusiner, and making great excavations there, including some of importance under the church of S. Anastasia. Though the search for statues, the discovery of which was the immediate object of the works, was unsuccessful, the Baron Visconti saw the importance of the excavations for historical purposes, and came to an arrangement, by which he gave for the Russian Museum certain duplicate statues from the Museum of the Vatican in exchange for the Vigna Nusiner, which the Russian Government was glad to be rid of.

The ground ready excavated thus became the property of the Pontifical Government, and the Minister of Public Works bought another adjacent vineyard called the Vigna Buttèroni, formerly known as the "Vigna del Collegio Inglesi," and the Orto Roncioni was now incorporated with it. By this arrangement the whole of the western slopes of the Palatine became the property of the Pope, and were gradually excavated. In 1860 the Farnese Gardens, which occupied about half of the summit of the hill, were purchased of the ex-King of Naples by Napoleon III., and Signor Rosa was appointed to superintend the works. There is reason to believe that they were originally undertaken with the same object as the Russian Government had in view, and that neither the Emperor nor his employé was aware how thoroughly the ground had been searched for statues when the Farnese Gardens were laid out, of which a full account was published by Bianchini in 1726. The great museum of Naples is full of statues found on the Palatine at that time. But as general attention had now been drawn to the historical importance of these excavations, they were continued with much public spirit for ten years, mainly, how-

ever, with the object above mentioned. A museum was built on the Palatine to secure such of the antiquities found as were not worth sending to Paris; and other objects were brought to the Palatine by Signor Rosa, such as sculptured sarcophagi, &c., to form the nucleus of a new museum there.

These excavations brought to light some palaces of the Caesars, and some of the walls of the Kings, which had been used as foundations for them. To these palaces, belonging to different periods, names are given not always very happily; some it has been found necessary to change, and others are still erroneous. It is now evident that these palaces were great public works, carried on systematically during three centuries by order of the Senate, and only called after the emperor in whose time each part was built. The Emperor Nerva had them inscribed with the words AEDES PUBLICAE. What is called "the Palace of Tiberius" is really of the time of Trajan and Hadrian, built on the site of the old *Regia* of the Kings; the true Palace of Tiberius is on the west side towards the Circus Maximus. The "Palace of Caligula" is set down at the top of the Palatine, near that of Hadrian, and yet we are distinctly told by contemporary authority (Suetonius, *Caligula*, c. 22) that it was at the bottom, near the Forum Romanum, and that the temple of Castor and Pollux, at the south-west corner of the Forum, was used as a vestibule to it: indeed, there are considerable remains of it joining on to that temple, together with part of the bridge across the Forum. What is called the "Palace of Augustus" (under the Villa Mills) is not of the Augustan period, but is a part of the great public building of the time of Domitian. This is clearly shown by reference to the plan, and by the fact that brick stamps of Domitian were found in the walls by Nibby. What is called "the House of the Father of Tiberius" is really the house of Hortensius purchased by Augustus, with the additions made to it by order of the Senate, as recorded by Suetonius (*Octavianus*, c. 72), Dion Cassius (lib. liii. c. 16), and in this part, which was built for state apartments, the beautiful frescoes were found. The great oval reservoir belonging to it, miscalled a *piscina*, is not a filtering-place, but a large cistern, such as Frontinus called a "Castellum Aquæ." There are no buildings of the time of Nero on this part of the hill, but his Golden House extended to that part of the Palatine called the Velia, and there are remains of it near the Basilica of Constantine. The palaces at the south end, with the Stadium, are chiefly of the time of Septimius Severus, in the third century. Further details would be scarcely intelligible without the plan attached to this work, which, though better than that published in photography by Signor Rosa, is not altogether so satisfactory as some others we have seen. The work, in this quarter, however, is still going on so rapidly that any plan soon becomes obsolete.

These excavations and researches, which are certainly the most important hitherto undertaken, are chiefly in the Forum Romanum, at the point where it touches the foot of the Palatine Hill. The foundations of the round temple of the Vestal Virgins have just been discovered at this corner in front of S. Maria liberatrice.

JOHN HENRY PARKER.

NOTES ON ART.

A statue of our great English potter Thomas Wedgwood has recently been placed in the Institute at Burslem. Mr. Gladstone, in a letter received on the occasion of the unveiling of the statue, tells us that "observation and reflection" have led him to regard Wedgwood "as perhaps the most distinguished individual in the whole history of commerce taken from the

earliest ages." Seldom indeed have the interests of art and trade been so successfully united as by him. Miss Meteyard, his admirers will be glad to hear, is about to publish another volume of autotype reproductions from his choicer and rarer works mostly in the collections of Dr. Sibson, Mr. Roger Smith, and Mr. Bowker.

The *St. Petersburg Journal* states that the Russian Government has determined to establish schools of design in the manufacturing districts of Russia, with the view of spreading the advantages of an artistic education and developing an artistic taste among the artisan classes. These schools are to be founded by the municipalities, merchant corporations, and artistic societies of Russia, but when necessary the Government will materially assist in their foundation, besides according them an annual grant. The classes are to be open free to pupils of every age and condition who know how to read and write, and special classes will be established for girls. The pupils will be furnished with all the materials necessary for their study at the lowest possible charge, and in the case of the poorest even this payment will be remitted. The schools, wherever it is practicable, will be annexed to some art museum or permanent exhibition of artistic models, and each pupil will be allowed not only to visit the museums, but to copy the works they contain. Thus we see that the example set by South Kensington is being followed even in Russia.

An excellent portrait of Faraday, engraved on steel by Jeens from the well-known photograph by Watkins, has been presented to the subscribers to *Nature* with the number for September 18th. It is further promised that this shall be only the first of a long series of portraits of scientific worthies issued in connection with that journal.

Admirers and critics of the works of the last of the great Venetian painters, Paolo Veronese, will find in the number of the *Revue des deux Mondes* for Sept. 1st a critical history and description of some frescoes by him in the Villa Barbaro, near Venice. These frescoes have hitherto attracted little notice, but they have been recently carefully cleaned by the present proprietor of the Villa, Signor Angelo Giacomelli, and according to the critic of the *Revue* deserve to be reckoned among Veronese's finest decorative works. The most important is a representation of Olympus, with figures of colossal size. Strange to say the gods and goddesses in this painting are not partaking of any sumptuous repast, such as Veronese usually loved to offer to his characters, whether mythological, angelic or divine. Not even Hebe or Ganymede, so far as we can understand, is present to pour out draughts of nectar for the thirsty immortals.

Besides this grand fresco of Olympus, there are in the great hall of the Villa eight allegorical figures by Veronese, which are highly praised for their nobility of form, freshness of colour, and fine decorative effect.

The colossal figure of Germania surmounting the Column of Victory recently unveiled at Berlin in commemoration of the battle of Sedan was modelled by Herman Schies, of Wiesbaden. The artist has represented Germania as a winged female figure, holding in her right hand the laurel crown of victory and in her left the German banner with the eagle and iron cross. The figure stands on a pedestal of grey sandstone, at the corners of which are German eagles watching over French trophies. The names of the four principal battles of the late war—Weissenburg, Wörth, Sedan, and Paris—are written beneath, and on the base of the pedestal is a long inscription, besides the names of more than 400 of the Nassau infantry who fell fighting for their country. Herman Schies was a pupil of Hopfgarten in Wiesbaden, and afterwards of Drake in Berlin. His fine figure of Germania in the churchyard of Kirchheimbolanden, in the Palatinate, has been much extolled by German critics, and no doubt led to his being chosen as the sculptor of the great national memorial at Berlin. He has also, it is said, received a commission for another Germania to be set up at Saarbrücken.

The *Portfolio* for September is enriched by a charming little etching by G. Greux from a picture by Theodore Rousseau. The soft brilliancy of execution and the warmth of colour in

this small plate cannot be too highly praised. It was courageous of P. G. Hamerton, admirable etcher though he be, to place an etching of his own beneath it. An article by F. W. Burton on the Castellani Collection in the British Museum is of much use in calling attention to the inestimable value of some of the early Greek sculptures in that collection. The large female head in bronze, the "presiding divinity of the whole," Mr. Burton considers to "stand quite peerless amongst the treasures of Hellenic art at present extant."

In spite of Dr. Julius Meyer's seemingly exhaustive treatise on Antonio Allegri da Correggio originally published in the *Allgemeines Künstler-lexicon*, and afterwards printed in a separate form, another memoir of the painter has been recently put forth by the Chevalier Quirino Bigi which, says the *Architect*, contains some new facts that entirely contradict all our recently gained knowledge concerning Correggio and his circumstances. These facts have, we are told, been derived from documents found in the archives of Correggio and Parma; but these archives had been well searched before Dr. Meyer wrote, and we can scarcely suppose that they have since then yielded any very abundant harvest of new material.

The town councillors of Lüneburg propose to sell the whole of the valuable and ancient silver plate belonging to the town, which includes work by Benvenuto Cellini and other artists of note; one offer for the purchase of the whole collection has been declined, in the hope, it is said, of larger bids to come from England.

New Publications.

- ARNOLD, E. *Hero and Leander*; from the Greek of Musaeus. Cassell.
- BOOTH, J. *Epigrams, ancient and modern*. Hotten.
- CATALOGUE de la Collection de M. John W. Wilson, exposée dans la galerie du cercle artistique et littéraire de Bruxelles, au profit des pauvres de cette ville. Paris: imp. Claye.
- COLERIDGE, S. T. *Osorio: a Tragedy in Five Acts*. Pearson.
- HUGO, Victor. *La Libération du Territoire*. Paris: Michel Lévy frères.
- KUGLER, F. *Geschichte der Baukunst*. 5 Bd. *Geschichte der deutschen Renaissance* v. W. Lübke. 4 Abth. Stuttgart: Ebner und Seubert.
- LACROIX, Paul. *Manners, Customs, and Dress during the Middle Ages*. Chapman & Hall.
- OEUVRES complètes de Melin de Saint-Gelays. Edition revue, annotée et publiée par Prosper Blanchemain. Paris: Dassis.
- PAULUS, E. Ludwig Uhland u. seine Heimath Tübingen. Berlin: Grote.
- RIS-PAQUOT. *Dictionnaire des marques et monogrammes des Faïences, Poteries, et Porcelaines anciennes et modernes*. Paris: Delaroche.
- SAND, George. *Le Château de Picardu*. Paris: Michel Lévy frères.
- STRUMPELL, G. *Das französische Madrigal vom 16. bis 19. Jahrh.* Braunschweig: Meyer.
- VIOLLET-LE-DUC, E. *Dictionnaire raisonné du mobilier français*. Vol. vme. Fasc. 2^e. (*Armes de guerre offensives et défensives*.) Paris: Morel.
- VIOLLET-LE-DUC, E. *Lectures on Architecture*; translated from the French by B. Bucknall. Part i. Paris: Morel.

Theology.

Rational Theology and Christian Philosophy in England in the Seventeenth Century. By John Tulloch, D.D. 2 vols. William Blackwood and Sons, Edinburgh and London. 1872.

For varied and intense interest no past century of English history can compare with the seventeenth. The politician, the theologian, and the philosopheralike look back to it as a period of all-important revolution and change; and in these two volumes Dr. Tulloch has given us a study of one of its most significant phases—a phase, the close resemblance of which to our modern Broad Churchism must, as he observes, "strike every attentive reader." "The highest movement of Christian thought," as Dr. Tulloch characterises it, in that

stirring theological era, was neither Anglican nor Puritan in its sympathies, and consequently neither Anglican nor Puritan writers have vouchsafed it much attention. In an age of the fiercest religious controversy it was anti-polemical in its spirit. Its cause was pleaded rather from the study than the pulpit. And at a time when Owen, Baxter, and other divines of the Puritan school were filling the land with folios and quartos, the calmer thinkers to whom we are here introduced—whose more sparing utterance claims comparatively so modest an allotment on the library shelf—were conceiving in a higher atmosphere of thought works in which a generation increasingly weary and neglectful of controversial divinity, may find a literature at once rational, philosophical, and Christian.

The first volume is devoted to a group of "Liberal Churchmen"—comprising Lord Falkland, John Hales of Eton, Chillingworth, Jeremy Taylor, and Stillingfleet. Two introductory chapters—the first on the Spirit of Rational Inquiry in Protestantism, the second on Religious Opinion in England from the Reformation—put us in possession of the author's standpoint, and of his estimate of the relation of his subject to preceding experiences in the Church's history. The generous and cultured spirit in which the Reformation took its rise died out, according to Dr. Tulloch, under the "unhappy influence" of Luther and Calvin; dogmas and confessions multiplied, but inquiry came to a standstill, "arrested by the necessities of the age." A rigid Augustinianism was inculcated at the continental seats of learning, from Louvain to Geneva; and in Germany a noble theological activity degenerated into frivolous dialectical discussions that recalled the puerilities of the old scholasticism. From this state of things Arminianism only represented an inevitable reaction, and it is to the influence of Arminius, together (though in a very secondary degree) with that of Hooker's *Ecclesiastical Polity*, that Dr. Tulloch traces in "all the subsequent development of Protestantism" "a nobler and more comprehensive thoughtfulness and freshening life." Without here calling in question the general accuracy of this representation, we must nevertheless demur to the statement that "historical criticism in the modern sense took its rise in the Arminian school." The honour of initiating the historical method in relation to biblical studies undoubtedly belongs to Erasmus, whose claims to this distinction have been lucidly pointed out in a volume to which Dr. Tulloch more than once refers—Mr. Seebom's *Oxford Reformers*. Again, it is not very easy to reconcile the statement respecting Tyndale, at p. 40, that "he showed himself in his doctrinal conclusions independent of Augustinianism," with the assertion on the following page that "his leanings were Augustinian, even of a somewhat strong type." The fact really being, that Tyndale, whose doctrinal views were for the most part an echo of those of Luther, was an Augustinian of the most pronounced character.

The sketch of Lucius Cary, Lord Falkland, known to many only as the high-minded and moderate politician, is interesting as exhibiting him in another light, as the centre of a distinguished literary circle, and held by them in such esteem that in Cowley's eulogistic language,—

"—— learning would rather choose,
Her Bodley or her Vatican to lose."

Dr. Tulloch satisfactorily establishes the fact that the honour of educating Falkland belongs to St. John's College, Cambridge, and not to the foundation of the same name at Oxford; from Mr. Forster's theory, that Falkland was privy to the arrest of the Five Members, he altogether dissents; and in the more important question of his political consistency, shows that he throughout pursued an unvarying

middle course between the demands of the Puritans and the aggressions of Anglicanism. Falkland was a liberal Churchman, and, born out of due time, fell the "martyr of moderation." The sketch concludes with an analysis of his *Discourse of the Infallibility of the Church of Rome*, and Falkland needs no higher eulogium than that which describes him as one who, while "shrinkin from revolution in Church or State, would have liberalised both, in a truer and nobler sense than his contemporary revolutionists, ecclesiastical or political."

Not less a "martyr of moderation," though in a different fashion, was John Hales of Eton, for whose abilities and learning Bishop Pearson always professed such enthusiastic admiration, the coadjutor of Savile in his learned labours, and author of the famous tract *On Schism*. In the capacity of chaplain to Sir Dudley Carleton, Hales was present at the Synod of Dort, and his letters furnish perhaps the best account of the proceedings of that memorable assembly, to which Dr. Tulloch accordingly devotes a large amount of notice. It seems unquestionable that the Remonstrants on that occasion, notwithstanding the ability and eloquence of their leader Episcopius, were most unfairly used. Hales, shocked and pained beyond measure at what he witnessed, then and there, to use his own expression, "bade John Calvin good night," though, according to Dr. Tulloch, he did not "say good morning to Arminius." For the charge of Socinianism, brought against him by Aubrey, there seems to have been no foundation whatever. Amid the uproar of contending parties, Hales was a dispassionate seeker after truth. "For this," he said, "I have forsaken all hopes, all friends, all desires." His heroism met with the usual reward. When the Revolution came he was driven from his residence at Eton College and from his canonry at Windsor; his poverty compelled him to part even with his library; and he died at Eton, in the house of a widow, whose husband had been his servant, in poverty and obscurity. "A Churchman without narrowness; a friend of authority, who must yet have hated in his heart and deeply felt the folly of Laud's tyranny."

The sketch of Chillingworth is singularly interesting, and the criticism on the *Religion of Protestants* may be looked upon as the best account of the work that has yet appeared. It is no slight testimony to the real candour and honesty of the book, that though undisguisedly hostile to the theories of the Anglican Church, it was formally buried, at the same time as its author, with a series of Puritan anathemas that might compare in spirit, if not in length, with the immortal curse of Bishop Ernulphus.

The relation in which Jeremy Taylor and Stillingfleet, who come next, stand to the Liberal party, is characterised by Dr. Tulloch as "peculiar." Both contributed by a single important work—the former in the *Liberty of Prophecy*, the latter in the *Irenicum*—to the advancement of a movement with which "neither their special reputation nor the prevailing character of their theological activity has identified them."

In the second volume—which is devoted entirely to the Cambridge Platonists—the subject-matter has necessitated both deeper research and severer thinking; "the rational spirit," as the writer says, "broadened, and took to itself larger intellectual elements. It extended beyond the sphere of the Church, into the whole region of spiritual thought and philosophy." Unlike Hales, Chillingworth, and Taylor, the Cambridge Platonists were men who came from the Puritan side, and were all, with the exception of More, educated at the new Puritan foundation of Emmanuel.—Emmanuel, which in the seventeenth century outnumbered St. John's, and both in numbers and reputation was little inferior to Trinity.

In the introductory chapter, on the Historical Position of the Cambridge School, Dr. Tulloch assigns as the chief causes of this remarkable movement, the reaction that set in after the great Calvinistic triumph at the Westminster Assembly,—the philosophic speculation of the age, Baconian as well as Cartesian,—the renewed study of Plato and the Neo-Platonists,—and the instinctive protest evoked by Hobbes' strange apotheosis of external law as the sole and ultimate standard of morality. Of the new school, Whichcote, provost of King's—an appointment made when the Puritans were in the ascendancy, and seeking to remodel the university after their own mind—seems entitled to be regarded as the founder. A man of no great erudition, but of considerable powers of thought, wise, and broad-minded, he exercised as afternoon lecturer at Trinity Church, at a time when sermons ranked somewhat higher in the general estimation, a singular influence over the more thoughtful younger members of the university. It is evident however that Whichcote, like many other men of note in their day, was largely indebted for his popularity to some charm of personal influence and manner which his writings could not transmit. So far at least as his extant performances enable us to judge, he possessed rather a fine appreciation of high thought than original power. His sermons, as known to us, seem to be estimated by Dr. Tulloch somewhat above their deserts; his correspondence with his old college tutor, Tuckney, who remonstrated with him on his novel doctrines in the pulpit, and from which we have here copious extracts, strikes us as somewhat dull; and the "Aphorisms," where not evidently an echo of preceding thinkers, are sensible rather than brilliant. If indeed the sentiment quoted on p. 103,—that "God will not reject malign dispositions which will not be altered and subdued to the temper of heaven,"—is correctly given, it certainly seems no very favourable specimen of his expansive tolerance.

The genius of this Cambridge band was probably John Smith of Queens' (not Queen's, as it is here printed), a thinker "dead ere his prime." With greater originality than Cudworth, and less eccentricity than More, he left behind him nothing but "Discourses," delivered in the college chapel—a volume however which attests the possession of powers of a very uncommon order; and Dr. Tulloch scarcely exaggerates their merits in saying that "an ineffable light of spiritual genius shines in them all." "Powerful and massive in argument, they are," he adds, "everywhere informed by a divine insight which transcends argument. Calmly and closely reasoned, they are at the same time inspired. The breath of a higher, diviner reason animates them all."

Cudworth and More follow next. Dr. Tulloch does not appear to have consulted the unpublished manuscripts of the former at the British Museum, but those whose leisure does not admit of their attempting the perusal of the *Intellectual System of the Universe*, will here find an admirable criticism of that imposing *torso*. The argument is still that which theologians will perhaps always prefer as the most satisfactory reply to the inferences that are supposed to attach to the Darwinian theory.

To the estimate of Henry More, the poet and enthusiast rather than the philosopher, no exception can be taken, unless indeed we are inclined to accuse Dr. Tulloch of too respectful a treatment of the mystic extravagances of the recluse of Christ's College. His statement however that More "nowhere discusses or shows any interest in the doctrinal differences of Calvinism and Arminianism," is not quite correct; for we find in the edition of More's Theological Works, published 1708, that he is at some pains to propound a *media via* between the two doctrines, and plainly

expresses his belief "that whosoever is damned, it is long of himself."

Another brief chapter is devoted to the minor lights of the school, among whom Culverwel, in his treatise *On the Light of Nature*, arrests the attention as a vigorous repudiator of the Platonic doctrine of innate ideas; and this, it is to be observed, in apparently entire independence of Hobbes—whose *Leviathan* came out only one year earlier—and nearly thirty years before the appearance of Locke's *Essay*. In the concluding chapter the position of these illustrious thinkers, in relation to Church policy, is carefully distinguished from that of modern Dissent;—"the latter," says Dr. Tulloch, "by the pressure of its special dogmatisms crushes all further spirit of Christian inquiry, and, within its own pale, or as far as it can, all freedom of thought;" the theory advocated by the former was that of a Church that "had no final element of control except the collective national will."

On reviewing in the aggregate the characteristics of this party, it may be said that its main significance lay in the protest which, in theology yet more than in philosophy, it asserted against the developments of mediævalism. The ancient symbols and confessions, in their opinion, "had no other design but to testify, *not what was to be believed*, but what the authors of them themselves believed." Chillingworth himself declared that, in subscribing the articles of the Church, he intended nothing more than "a general approval of her doctrine,"—he accepted them as "articles of peace." To the mediæval belief in the infallibility of general councils, a belief in which even Luther so largely shared, both John Hales and Jeremy Taylor gave scarcely more countenance than Gregory Nazianzen himself. Falkland, from his seat in the House of Commons, while warmly defending the institution of the episcopal order, distinctly repudiated all notion of their existing *jure divino*. Cudworth, in his treatise *On the Lord's Supper*, not merely rejects the doctrine of the Real Presence, but regards the rite as non-sacrificial and simply commemorative.

On the present value of the literature bequeathed us by this school it would be unwise to insist too strongly. Many of their views have been urged with a sounder erudition, and far more effectively, by the modern representatives of the movement; many of them have been definitely abandoned. But the appearance of such a school, in such an age, is a very interesting and noteworthy phenomenon indeed, and to exhibit it in its true historical relations becomes consequently a matter of paramount importance. But here Dr. Tulloch's treatment appears, to say the least, somewhat defective, inasmuch as he has either passed over with insufficient notice or has altogether neglected certain factors in this notable development of free thought which cannot justly be disregarded.

In the first place, the liberal theology of the Cambridge Platonists was a distinct tradition from the Greek Fathers. It was from the study of writers like Origen and Clemens Alexandrinus that they drew courage to shake off much of mediæval doctrine. For their knowledge of those Fathers they were mainly indebted to the labours of Erasmus—an obligation which Stillingfleet himself recognises so emphatically, and to which he mainly attributes the Reformation. Yet with reference to this source of inspiration Dr. Tulloch is almost altogether silent; and his silence is all the more remarkable in that Dean Stanley—to whom these volumes are very appropriately dedicated—has already drawn attention, in his *Eastern Church*, to the importance and value of the tradition. It seems singular, when we hear so much about Arminius, to miss all reference to these earlier but not less influential thinkers.

Again, looking at this as essentially an academic movement (so far at least as concerns the writers treated of in the second volume), we should have expected a careful study of the points of contrast which it presents to similar preceding efforts. The schoolmen and the Cambridge Platonists had characteristics in common, which seem to call for some examination of those of difference. Both accepted, as a starting point, the truth of Christianity, and both then proceeded to approve it to the reason;—the former rather to the logical faculty, the latter to the understanding. Albertus and Aquinas, not less than Cudworth and More, sought to devise that system of reconciliation of which Occam, like Bacon, despaired. But Dr. Tulloch appears to have started with the assumption that the writers with whom he is concerned had nothing to do with the schoolmen, and that assumption has more than once led him into grave misrepresentation. One instance must suffice. Speaking of Whichcote, he says, "He moves in an ideal and open atmosphere, *unfamiliar to the school-theologian*. Truth is not embodied to him in this or that form of divine assumption, standing apart from the ordinary cycle of human knowledge and experience. Religion does not displace, or supersede, or make an extraneous addition to other truths. It is apprehended as the summit and ideal of all others." In illustration of this statement he quotes from Whichcote's "Aphorisms" the following sentiment: "God hath set up two lights to enlighten us in our way: the light of reason, which is the light of his creation; and the light of Scripture, which is after-revelation from him." Now we have only to turn to the *Summa* of Thomas Aquinas (*Prima Secundae*, quaest. 68, art. 2), and we find these words: "Ratio autem hominis est perfecta duplíciter a Deo; primo quidem naturali perfectione, secundum scilicet lumen naturale rationis; alio autem modo quodam supernaturali perfectione per virtutes theologicas. Et quamvis haec secunda perfectio sit major quam prima, tamen prima perfectio perfectiori modo habetur ab homine quam secunda: nam prima habetur ab homine quasi plena possessio, secunda autem habetur quasi imperfecta." Making use of a beautiful metaphor, the schoolman then adds: "Sol quia est perfecte lucidus, per seipsum potest illuminare; luna autem, in qua est imperfecte natura lucis, non illuminat nisi illuminata." Precisely the same thought is to be found in the third chapter of the *Contra Gentiles*; and in fact it is in every way probable that Whichcote's "aphorism" was nothing more than an unconscious echo of what he had heard of the *Summa*, as expounded in the lecture room.

Finally, while too neglectful of the patristic and scholastic relations of his subject, Dr. Tulloch seems to us to have exaggerated the influences of Arminianism. Long before Arminius the controversy respecting free will had been waged by his fellow countryman, Erasmus, against Luther; and long after Arminius his doctrine was espoused by some of the fiercest opponents of religious freedom. Even among those whose lives and writings Dr. Tulloch has here set before us, two—Falkland and Culverwel—appear to have been as stoutly Calvinistic as any divine in the Westminster Assembly; nor is it to be forgotten that, at the very time this Cambridge movement was at its height, it devolved upon the Calvinistic party on the continent, as represented by Pascal and the Jansenists, to assert the cause of spiritual freedom against the Jesuits, who were Arminian to a man. It must however be admitted that these two volumes contribute materially to the refutation of Buckle's overstrained theory, that the "professors of Calvinism are more likely to acquire habits of independent thinking than those of Arminianism." Meanwhile we note, not altogether with satisfaction, that as in the last century Cambridge was indebted

to Principal Wishart, of Edinburgh, for an effort to preserve the memory of Whichcote, so, in the present day, it is to learning and research across the Tweed that she owes this careful, and in many respects very able, study of perhaps the most brilliant circle of thinkers that the university has known.

J. BASS MULLINGER.

Ewald's Theology of the Old and New Testament. [Die Lehre der Bibel von Gott, oder Theologie des A. und N. B. von H. Ewald.] First Vol. Doctrine of the word of God. 1871, pp. 474. Second Vol. 1873, pp. 350. Leipzig : Vogel.

PROFESSOR EWALD'S new book is too important to be left unnoticed till it attains its completion. Yet we could wish to have the whole work in our hands before writing any estimate of its value. For the book is as much a system of digested Dogma as a Biblical Theology in the usual sense of the word; or shall we rather say that for our author the modern distinction between Biblical Theology and Dogmatic does not exist. He judges it possible to frame by a single process a harmonious organism of systematic doctrine resting on the Bible, without the intermediate labour of partial inductions which forms the basis of the Biblical Theology of the moderns.

Ewald in truth has never been fond of showing to his readers details of inductive or dialectic analysis. His method of treating history shows a peculiar power better known in another branch of science. It is well known that first-rate genius in mathematics is characterized by the faculty of attaining by an immediate intuitive construction results which other thinkers can reach only by analysis. Ewald's greatest discoveries have been made in the same way; but he has not been always so alive as the mathematicians to the necessity of backing up the intuitions of genius by processes of analytical verification, which are not only more intelligible to most minds, but frequently are the only sure means of detecting the errors of a too bold construction.

When we say that in the volumes before us Prof. Ewald has commenced a gigantic application of his favourite synthetic method to the new and more difficult problem of dogmatic construction, we are far from implying that the work which we are characterizing is one of speculation disjoined from Biblical fact. No man has such a hold of Biblical minutiae as our author, and the present treatise not only rests on the vast mass of observation and combination already laid before the public during fifty years of unparalleled literary activity, but presents us for the first time with a profusion of new and subtle hints and delineations of points of Biblical detail, all worked up into the system with that power of universal absorption which is so characteristic of Ewald's theories. Nothing can be more imposing than this kind of work. Every reader of Ewald's most finished productions—such as his general introduction to Hebrew Poetry—has felt the impress of power pertaining to a treatment of the subject which, beginning apparently with a bare definition, gradually swells out into a rich organic complex, into which every historical fact is successively taken up, apparently without effort or hesitation. But no previous book has given so brilliant an illustration of this power as the "Biblical Theology." Nowhere has the variety of facts been so great, or the organic scheme of thought in which they are comprehended so extensive.

It must be added that so extraordinary a display of intellectual power does not fail to excite some misgivings. We are never thoroughly assured of the soundness of an evolution of thought which is not guided and tested by dialectic, or of the certainty of a combination of observations that has not been checked off by the usual processes of inductive analysis. And our suspicions become graver when the thought developed is so large, and the observed facts to be combined and subsumed under the thought so numerous, as in the present

case. Ewald, no doubt, would urge that the very number of details of Biblical statement which he fits into his construction is a proof of its justice. The natural philosopher has no better test for the correctness of the curve which expresses a new law than the number of observed points that lie on it. But it must not be forgotten that the Biblical phenomena which lie before the theologian are not pure and simple facts; they are both complex in themselves and always more or less coloured by subjective elements of exegesis. No man is so infallible that his exegesis is not in a measure attracted towards his dogmatic prepossessions and *vice versa*, and a very slight displacement of each of a vast number of facts may produce a serious deflection of result which can only be checked off by processes of verification.

As Ewald's generalisations from facts cannot be viewed as secure till they are tested by inductive analysis, so the balance of parts in the organization of his system certainly deserves sharp dialectic treatment. To our mind this is the main fault of the book. We always expect of Ewald that his generalisations from facts will be instructive even where they are not conclusive; but systematic thought not dialectically developed is either absolutely right or absolutely worthless as *system*. But of strict dialectic Ewald seems incapable. He is ready to offer in its place the richest concrete illustration or historic evolution of his thought. Some of the finest passages in the first volume are in fact long synthetic justifications of thoughts which demand for the purposes of dogmatic an incisive dialectical treatment. The first of the three great questions pertaining to Revelation which our author puts concerns "the essential nature of the Revelation of God's word." This question is answered in an elaborate historical survey of the progress of Revelation from the moment when man first felt the need of converse with God to the fulfilment of all Revelation in Christ. With this survey is inwoven much beautiful thought as to the relation of Revelation to the fear of God and its results in the establishment among men of the highest spiritual fellowship of life and truth. But the whole of this imposing essay, eminently instructive as it is, fails to bring the matter to the point. We are made to feel Revelation, to see it growing in history, to sympathize with it; but we never gain that clear logical statement of its dialectic moments without which the ends of system are not attained.

Nowhere, however, is the lack of dialectic handling more perceptible than where the author proceeds to lay down the divisions of his subject. The truths of Theology presented in the Bible are on the one hand truths to be believed and so form the *Glaubenslehre* (Doctrine of Faith). On the other hand the same truths are the ground of duty, and from this point of view we get the *Pflichtenlehre* (Doctrine of Duties). Once more, since these truths become finally and fully efficacious only in fellowship between God and man, we have, as the third part of the system, the doctrine of the Kingdom of God. Of this division the first two parts are the *fides* and *observantia* of the old Dogmatic; but to the trilogy given by Ewald we can recall no closer analogy than the *quid credas, quid agas, quo tendas* of the Middle Ages. It is certain that the doctrine of the Kingdom of God was unduly neglected in the older systems. But was not the source of this neglect the too narrow conception of Christian Ethic as consisting exclusively of exposition of the moral law? The Kingdom of God is the Christian *Summum Bonum*, the highest moral idea, and so, one imagines, should precede and dominate the doctrine of duty. At any rate Ewald's division is not plainly convincing as it stands, and it is not too much to wish that instead of leaving its justification to the sequel, our author had offered some dialectical vindication of its completeness, instead of simply throwing it out as obviously adequate.

The first volume is not part of the system thus divided. It contains an introductory discussion on the doctrine of the Word of God, and in fact as Ewald puts it, sets before us the way in which the word of God as contained in the Bible appears among men. The whole volume is rich in thought and is, we think, both from its subject and its form better fitted to be popular and useful in an English translation than almost any other of Ewald's books. It would be injustice however to attempt to give within our brief limits any outline of discussions which obstinately refuse to be divided into heads. Some idea of the volume may perhaps be conveyed by saying that it is in great part a sort of *historico-psychology* of Revelation. (Comp. *Academy*, vol. ii., p. 535.)

The second volume* commences the system proper, and takes up the doctrine of God, as the first part of the *Glaubenslehre*. It is obvious that the whole work must extend to a considerable size. And it must be taken along with parts of the author's *History of Israel*. But for the discussions of the History of Biblical ideas in that book, Professor Ewald would have thought it necessary to append to the system a purely historical section.

The doctrine of God, which is to be followed by the doctrines of the Universe and of Man, is approached by a discussion of Spirit; for though a fixed notion of God was earlier developed than the notion of Spirit, the immediate knowledge of God's Being comes most clearly through the knowledge of what Spirit is, and the God of the Bible is in the very earliest times a God who is Spirit (not *a* Spirit). Spirit is that energy of unseen life behind the world of sense which man first learns to recognise on the analogy of his own psychical experience; and in this unseen region the one unchanging, all-creating, sanctifying Spirit of God appears in contrast to the ever varying, waxing, and decaying multiplicity of human Spirits.

The next great question is the personality of God—the fundamental truth of personal religion that He presents himself as *Thou* to *me*. The personal God of the Bible is not an arbitrary being—not even in Exodus xxxiii. 19. He is a wonder-worker, for he is infinite; but in all things is *one* and unchangeable, whether considered in his inner essence as Spirit, or in his outer essence (*the Way*) as Love.

Our author next passes on to the three main truths, that God is Spirit, Love, and One. Under the first head we have a historical survey of the battle fought by the doctrine that God is Spirit during the whole course of the Bible history. Then are enumerated the individual points in which God's Spirituality becomes significant to us. On the one hand God is Creator, Eternal, Unchangeable—on the other All-present, All-knowing, All-working. In this part of the work we would specially mention the discussion of Theophany, the remarks on the notion of Heaven as God's dwelling-place, and the exposition of the notion of a miracle.

Love, says Ewald, is the instinct of spirit to direct its inclination and force to a definite object. God then, who has no needs, acts from pure love. This leads to discussion of God as good and as Father. Next comes the subject of the outgoings of Love, from which is deduced the doctrine of God's Wrath and Jealousy. In this connexion we have an elaborate and important discussion of the addition to the Second Commandment, after which follow various considerations as to the relations of God's Righteousness, Wisdom, Longsuffering, &c. Finally God's eternal love gives rise to

his Faithfulness. But the most comprehensive name for all that belongs to this head is God's Holiness. The unity of God considered internally implies his Perfection, Loftiness, and Blessedness. On the other hand, God as one is also the only God and the true God. To these considerations is attached a most important essay on the world of Spirits—Angelology—and another on the names of God, which contains considerable additions of detail to what Ewald has formerly written on this head.

It has scarcely been possible for us to show how many points are touched in this volume. All remarks on detail must be reserved for a second paper, in which we propose to discuss some individual points of interest.

W. ROBERTSON SMITH.

Intelligence.

The new Commentary on Proverbs by Dr. Delitzsch is most elaborate and thorough, extending to upwards of 500 clearly printed pages, and saturated, as one might anticipate, with rabbinical and other learning. No difficulty is overlooked, or treated in a superficial or cursory manner. The exposition, also, is characterized by perfect fairness, and a sincere desire to elicit in each case the thought to which the sacred writer intended to give expression. Though very decidedly conservative, the author, as is known, does not hesitate to depart from traditional views, when he cannot honestly maintain them critically. Thus, he assigns the authorship of the first nine chapters, not to Solomon, but to an unknown writer of the age of Jehoshaphat. And he ventures occasionally to suggest or approve emendations of the traditional text, though not so often as would seem to be necessary. The faults of the Commentary are principally those of excess. Its value and usefulness would have been increased by abridgment. Many of the grammatical explanations might have been omitted. And the remarks as to the radical meaning of words are occasionally more curious than instructive. Thus, it does not help us to understand i. 13 and iii. 9, to be informed that etymologically פָּנִים denotes "Schwerwiegende Habe die das Leben leicht macht," and פְּנֵי מִרְאֶת יְהוָה, "fac Jovam gravem de levitate tua." The author, indeed, from his long familiarity with rabbinical writings, seems to have contracted not a little of the rabbinical spirit. But faults such as these do not detract materially from the value of a work which is otherwise calculated to be so useful to the student.

Mr. Elzas, whose handy edition of the Book of Job we noticed some time ago (*Academy*, vol. iii., p. 430), has brought out through Messrs. Trübner the first volume of a work on the Minor Prophets, executed on a similar plan. It will be found useful by less advanced students. The illustrative notes leave comparatively little to be wished, but the author's acquaintance with modern criticism is limited.

We have been favoured with the sight of an unpublished pamphlet of great interest to Biblical critics, by Bishop Colenso. It consists of three parts: i. The Age of the Elohist narrative in Genesis—a detailed answer to the essay of Dr. Kosters in the *Theologisch Tijdschrift*, to which reference has already been made in these pages; ii. A Comparison of the language of the Deuteronomist with that of Jeremiah; iii. The Age of the 68th Psalm—a fragment of part vii. of the Bishop's great work, which is now in the press. Prefixed are some brief answers to the criticisms of English reviews, including our own, from one of which we learn with interest that the Bishop has been convinced by Dr. Oort that the prophecy of Joel must be set (as a whole?) in the age of Zedekiah.

Contents of the Journals.

Vierteljahrsschrift für deutsch- und englisch-theologische Forschung (ed. Heidenheim), vol. iv. No. 3.—Assyrian Researches; by A. Scheuchzer, Conclusion, with lithograph. [Asiatic history in the light of the Egyptian monuments.]—The Samaritan chronicle of the High Priest Eleazar (11th cent.), and [Samaritan] Prayers of the High Priest Amram; by Editor. [The former from a Bodleian, the latter from a Vatican MS.]—No. 4.—Jewish interpretations of the Psalms; by Editor. [Extracts from the Midrash Tehillim, translated; chiefly valuable for the history of exegesis.]—Criticisms on the text of the Proverbs. [Valuable; should be read with Lagarde's *Anmerkungen zur griech. Übersetzung*, Leipz., 1863.]—The Christology of the Karaites [Containing a remarkable Karaite testimony to "Jesus of Nazareth, a great sage, a righteous and pious man," whose teaching is represented as opposed to that of his followers], and A Samaritan Prayer [illustration of Samar. angelology and astrology]; by Editor.—Vol. v. Nos. 1 and 2.—Criticism of the text of the Epistle to the Romans, and The Christology of the Samaritans; by Editor. [The former, an attempt to show that our present text of Romans is probably a translation from the Aramaic, and not free from errors, e.g. in i. 17, 19, ii. 16, 20, iii. 31, iv. 18, v. 6, 7, vi. 23,

* The second volume contains a good deal of preliminary matter, in which the perhaps most interesting point is the defence of the attempt to find a single, consistent, though gradually developing, scheme of doctrine in Scripture.

xv. 28.]—On the most recent Syriac literature. [Notice of vol. i. of Zingerle's *Monumenta Syriaca*, and Mössinger's *Supplement to Cureton's Corpus Ignatianum*.]

Studien u. Kritiken, 1873, No. 4.—On Freewill; by W. Schmidt.—A new exposition of Matt. xi. 12; by F. F. Zyro.—On "the works of the law" in Romans and Galatians; by F. Märcker.—A letter of Maximilian II. to Melancthon; by T. Brieger.—Lagarde's *Prophetæ Chaldaice*; rev. by Klostermann.—Dietzsch's *Adam und Christus* (Rom. v. 12-21); rev. by F. Sieffert.—Martensen's *Christian Ethics*; rev. by J. Hamberger.

Theologisch Tijdschrift, Sept.—Grote on Aristotle; by Dr. van der Wijck. [An appreciative summary of the contents of Grote's great work.]—Critical contributions, &c.; by Dr. A. Kuennen, viii. Job and the suffering servant of Jahve. [An answer to the arguments of Seinecke and Hoekstra for the identification of Job with the "Servant" of the "Second Isaiah," comp. *Academy*, vol. ii. p. 138.]—Literary survey:—Dr. Colenso's latest contributions to the criticism of the Pentateuch, the *Speaker's Commentary*, vol. iii., L. Geiger's *Commentatio, quid de Iudeorum moribus atque institutis scriptoribus Romanis persuasum fuerit*; Anger's *Lectures on the Messianic idea*, noticed by Dr. Kuennen; Otto's *Corpus Apologetarum*, vol. ix., Lorgion's *Ecclesiastical History of the Netherlands*, Baehring's *Thomas von Kempen*, Douen's *L'Intolérance de Fénelon*, and other works, by Dr. Kuwenhoff.

New Publications.

BÖHL, E. *Forschungen nach e. Volksbibel zur Zeit Jesu*. Wien: Braumüller.

COLET, Dean. *An Exposition of St. Paul's Ep. to the Romans*, delivered as Lectures in the University of Oxford about the year 1497. Ed. J. H. Lupton, M.A. Bell & Daldy.

HAUSRATH, A. *Neutestamentliche Zeitgeschichte*. 3 Thl. Die Zeit der Märtyrer u. das nachapostol. Zeitalter. 1 Abth. Heidelberg: Bassermann.

KNEUCKER, J. J. *Siloah. Quell, Teich und Thal in Jerusalem*. Heidelberg: Groos.

MARTINEAU, J. *Studies of Christianity*. Longmans.

PROBST, F. *Die kirchliche Disciplin in den drei ersten christl. Jahrhunderten*. Tübingen: Laupp.

THENIUS, O. *Die Bücher der Könige erklärt*. 2 Aufl. Leipzig: Hirzel.

Physical Science.

A General System of Botany, descriptive and analytical. By Em. Le Maout and J. Decaisne. Translated by Mrs. Hooker. Rearranged with additions by J. D. Hooker, C.B., M.D. Longmans, Green, & Co., London.

Of the original authors of this remarkable book Le Maout is best known for his *Leçons élémentaires de Botanique*, which is an excellent example of clear and attractive exposition, while Decaisne has long held a chief place amongst living analytical botanists. It was in every way worthy of its distinguished authors. Taking into consideration the comprehensiveness of the plan, the moderate price (the English edition is two and a half times as costly), and the profusion of the illustrations, of which there are no less than 5,500, executed with all the characteristic excellences of French draughtsmanship, probably few scientific books have ever been published which there was more satisfaction in possessing. One especial merit is the comparatively large space given to the lower or Cryptogamic plants. Nothing is more striking in comparing the general plan of a book on systematic zoology with one on systematic botany than the disproportionate space which is usually occupied in the latter by the higher organisms to the exclusion of the lower. Here the apportionment is more equitable even if it is still far from adequate. There is no doubt a certain amount of apparent reasonableness in the fuller treatment which is always given to flowering as compared with flowerless plants. Everywhere the former dominate over the latter, and if they receive more than their due share of attention we may admit that they never fail to claim it. From the point of view however of the student of general biology every form of life requires a careful study, and the extent to which each is re-

presented in the field of nature does not concern him but only the systematist. The present work however is quite indispensable to all students of general biology, as none other at present existing, except perhaps Schnizlein's *Iconographia* which is more costly and far less convenient, contains anything like as much information about the different plans of organisation included in the vegetable kingdom.

Comparing the two editions, we find that the principal change in the English one is in the sequence of the orders of flowering plants. The original authors adopted that of Adrien de Jussieu, which has not, however, been much used. It places at the top of the series the *Monopetalae*, concluding with the highly consolidated *Compositae*. Amongst all systematists who admit the doctrine of descent this is accepted as their proper position in any arrangement based upon it. But no linear sequence can ever be properly adjusted to represent genetic affinities. The Candollean, which is adopted in the present edition, though no doubt in principle artificial, is very convenient for purposes of instruction, and inasmuch as a vast body of current botanical literature is adapted to it, no attempt should be made to discard it for purposes in which it is necessary to use some sequence, until to continue to do so actually stands in the way of scientific progress. Dr. Hooker does not see his way to improve on De Candolle's arrangement, "which places *Monopetalae* in the centre of the series, flanked on either side by *Polypetalae* and *Incompletæ*, which have many cross affinities, but have few affinities of any consequence with *Monopetalae*" (p. 994). Mr. Bentham and Dr. Hooker have also employed it in their *Genera Plantarum*, a work of enormous labour still in progress, and which will for a long future to come be regarded as a digest of modern Phanerogamic Botany. They have introduced into it, however, some modifications which are also employed in the present work. The most important of these is the intercalation between the manifestly perigynous and hypogynous orders of a new series, *Discifloræ*, characterized by a highly developed staminiferous disk. The object is to provide a receptacle for those orders, which it required some violence to group with either *Thalamifloræ* or *Calycifloræ*. If the use of such a structure as the disk for classificatory purposes is not without its difficulties, it must be remembered that it hardly claims any higher recommendation than that of expediency. Many orders are allowed to retain their full rank in the present work which in the *Genera* are reduced, but this, as is here pointed out, in a book of this kind is not without its advantage in allowing their distinctive morphological peculiarities to be more fully treated. It is interesting to get indications here of the views which will be ultimately adopted by the authors of the *Genera Plantarum* as to the position of the orders which the published portions of that work have not at present reached. Without going the length of Strasburger it may however perhaps be regretted that Gymnosperms are not definitely separated from angiospermous Phanerogams. With regard to the Monocotyledons, which have been very much neglected by systematists, Dr. Hooker has effected in this book a good deal towards a more rational settlement of their classification.

While a linear sequence is maintained at all it seems hardly worth while to attempt materially to adapt it to the theory of descent. Every such system must be of necessity more or less artificial, since it aims at expressing relations which are extremely complex in terms, if one may say so, of a single variable. It of course continually breaks down; a greater measure of success will reward any attempt to express these relations by employing some sort of chart; but their fullest expression would only be satisfied by the use of space of three dimensions. Dr. Hooker, in an extremely suggestive although very brief essay on classification given as part of an

appendix, compares the relations of some of the larger groups of plants to those of parti-coloured beads in a necklace which touch at similarly coloured points of their surface. "The position of each bead in the necklace is determined by the predominance of colours common to itself and those nearest to it." Robert Brown, whose labours chiefly consisted in the important work of determining the proper limits of Jussieu's orders, expressed himself as altogether indifferent about arranging these into a series, "ipsa natura enim, corpora organica reticulatim potius quam catenatim connectens, talem vix agnoverit." (*Prodr. Flor. Nov. Holl.*, p. v.) Linnaeus was equally aware that a linear arrangement was insufficient. "Plantae omnes utrinque affinitatem mont strant uti territorium in mappa geographicā" (*Phil. Bot.* 77). Such a map Giseke attempted to give in the *Praelectiones* which he published (1792) after Linnaeus' death. A diagram on the same principle constructed by Prof. Huxley for the animal kingdom may be seen in Spencer's *Principles of Biology*, i. 303. For plants, at any rate, this will be found probably to be both more convenient, and to involve less actual assumption than the "stammbaum" which is the delight of German Darwinians. In point of fact such a chart is an orthographic projection of the stammbaum not flattened out upon a page like a herbarium specimen, but fully expanded on all sides and seen as we may picture it in our imagination in a bird's eye view from above. In such a view of it, to quote from the address recently delivered by Mr. Bentham to the Linnaean Society: "We should have the present races represented by countless branches forming the flat topped summit of the Dicotyledonous tree—a hundred to a hundred and fifty thousand perhaps, if we take into account species only.....; the branches which immediately bore their present branchlets, as well as the lower more general ramifications, will have wholly disappeared from our view, or left only here or there the most fragmentary traces; and the surviving branches themselves will be most irregularly placed. Here we should see thousands crowded into compact patches definitely circumscribed at every point (*Compositae, Orchideae, Gramineae, &c.*); then we should meet with enormous gaps, either quite unoccupied or a few solitary branchlets or small clusters isolated in the middle (*Moringa, Aristolochia, Nepenthes, &c.*)" (*Proc. Linn. Soc.* 1872-3, xx.) To Professor Flower I think we also owe a striking interpretation of the meaning of such a chart. He conceives the genealogical tree not bounded by the periphery of the present, but stretching away its vigorous shoots into the unseen future. The horizon of to-day intersects limbs and branches and twigs, and the mutual relations of their intersections upon its plane may be represented upon a chart in a manner which allows everything which can certainly be determined as to genetic affinity to be expressed with the least possible amount of assumption. Charts for other horizons in the past might be constructed, down to that primordial one which intersects only the first stem of all. Twigs at one level which have been but just given off will leave their "trace" upon the intersecting plane close to that of the parent branch. In planes of a higher level these twigs will have diverged farther, increased in size, and become themselves centres about which the "traces" of another order of twigs are grouped. These groups will themselves fall into larger compound groups, the whole corresponding to the different grades of ramification of some great bough given off below. One set will represent orders, and these themselves will form aggregates such as Lindley endeavoured unsuccessfully to express by his "alliances." Mr. Bentham and Dr. Hooker have also attempted something in the direction of this integration, if one may call it so, of the vegetable kingdom by arranging the orders into "cohorts."

We are only at the present time beginning to obtain a clear view of the proper scientific position which the labours of systematists and methodizers are entitled to hold. Even Mr. Mill, who brought to his philosophical studies a competent knowledge at least of general botany, failed to attain a clear grasp of the rational ends of classificatory science. He defines the general problem of classification to consist in providing "that things shall be thought of in such groups and these groups in such an order as will best contribute to the remembrance and ascertainment of their laws." This is quite sufficient to include modern ideas of classification, but Mr. Mill takes a much more contracted view of the matter when he lays it down that, in studying objects for the sake of extending our knowledge of the whole of their properties and relations, we must consider as the most important attributes those which would most impress the attention of a spectator who knew all their properties but was not specially interested in any. Such an individual might be perfectly uninfluenced by particular scientific views of the value of diagnostic characters, but he would on the other hand be almost certain to seize upon those characters which a more extended study would show to be really of only superficial importance. He would no doubt, for example, sanction the group of Rhizanths in which the Balanophoraceae are associated with the Rafflesiaceae, an order with which, as Dr. Hooker has pointed out, they have no real affinity whatever. When Mr. Mill advocates the claims of a classification based upon differences in the internal integuments as obviating the absurdity of having to kill an animal to determine its species and genus, he ignores (although he admits that a natural classification must be founded in the main on internal structure) the true aims of classification. For a classification should be the expression of our most complete knowledge, and this cannot be hampered by considerations of absurdity. Mr. Mill does not comment upon the absurdity of having to destroy a flower—as he must often have done—in order to determine the true classificatory position of the plant to which it belongs, or of having to sacrifice part of a mineral in order to ascertain its nature. And though he sees clearly enough that the Linnaean classification by compelling us to think of plants in groups determined by unimportant characters has, by preventing our thinking of them in the connections which would be most suggestive, a mischievous effect upon our habits of thought, he does not allow himself to see that to think of animals in groups determined by integumentary characters is likely to be just as harmful.

The systematists who were antecedent to the influence of modern doctrines of descent were content to extricate from amidst relatively unimportant but often extremely confusing adaptive modifications the genuine points of resemblance in an organism which sufficed to fix its systematic position. Classificatory science was little more than an intellectual exercise which presented problems of no small difficulty but not without interest. So far it was an end in itself. At the most it registered the resemblances of living things and enabled general propositions to be framed about them. But as Mr. Darwin has hinted, it seems to have been sometimes in the minds of systematists that something more underlay our classification than mere resemblance. "I believe," he says, in his *Origin of Species*, "that something more is included, and that propinquity of descent—the only known cause of the similarity of organic beings—is the bond, hidden as it is by various degrees of modification, which is partially revealed to us by our classification" (4th edition, p. 489). This sentence marked a revolution in its study. And there was this advantage, that the new régime was able peacefully to enter into all the possessions of the old. For in proportion as resemblance in

organisms had been critically ascertained, their propinquity of descent had been ascertained also. Classificatory science had hitherto occupied itself with attempting to determine affinities by an analysis of characters from without. It now calls to its aid in unravelling the threads of the evolution of forms of life, the study of development which aids in determining affinities from within; and it checks its results—for with present knowledge it can hardly do more—by the facts of geographical and stratigraphical distribution.

It is only right to do justice to the difficulties which beset the labours of the early systematists. We are too apt to imperfectly appreciate their work, and to forget its continuity with our own. As Linnaeus observed, "videbant quidem veteres esse ordinem in natura qui consistit in rerum similitudine at similia combinare et dissimilia discernere non poterant." (*Praelect. 2.*) *Tragus* was the first (1560) to attempt any sort of botanical classification, and this was natural in its method. But the want of knowledge of the relative value of characters long stood in the way of both *Tragus* and his successors. Even as late as the close of the seventeenth century, a naturalist so philosophical as Ray was still blind to the utter absence of any classificatory significance in the herbaceous, fruticose, and arborescent habits of plants. He retained divisions founded upon them in his *Historia*, "et rompt ainsi," as Mirbel remarks "d'un trait de plume une multitude de rapports naturels." Linnaeus (and it is upon achievements of this kind that his true position as a naturalist depends) made an immense advance in determining the subordination of characters. This enabled him to group species into genera upon principles which to this day need little revision. But beyond this—to combine genera into larger groups or orders he found himself unequal. He saw by the intuition which is the possession of every great naturalist glimpses, but still nothing more than glimpses, of how it might be done. In the meantime he devised his artificial system, for which he claimed no higher value than that of utility. "Methodus artificialis sola valet in diagnosi." He thought that the time had not come for the maturation of a truly natural method. "Qui loco methodi naturalis disponunt plantas secundum ejus fragmenta respunntque artificiale, videntur mihi iis similes qui commodam et fornicatam domum evertunt, inque ejus locum reaedificant aliam sed tectum fornicis conficerent non valent" (*Gen. Plant. ed. 6.*). But his great ambition was always to substitute a natural method for his artificial one, and his thoughts were occupied with the problem to the end of his life. "Diu et ego circa methodum naturalem inveniendam laboravi, bene multa quae adderem obtinui, perficere non potui, continuaturus dum vixerom" (*Classes Plantarum* 485). And it is remarkable that he had some insight into the true meaning of classification. His use of the word affinity was more than metaphorical; it actually implied something like genetic relationship. It is true that he formulated the well-known dictum "species tot numeramus quot diversae formae in principio sunt creatae." Nevertheless he believed that these species were genetically related to genera and orders, though not, it is true, in the way which is now accepted. Creation proceeded from the universal to the particular; orders gave birth to genera, and genera to species. "Supponendum plantas, quae ex ordinum miscela provenere id est genera ejusdem ordinis iterum inter se misceri; tunc orientur species" (*Praelect. 18.*) To us this seems merely mystical and quaint, but nevertheless the essential fact which underlies it is that resemblance and genetic relationship linked themselves together in the mind of Linnaeus, though the age in which he lived was not ready for the full and complete apprehension of the causal connection of the two things.

It is impossible within the limits of this article to review the classification of Cryptogams from the point of view of

genetic relationship. There are grave difficulties in correlating the two series of vascular Cryptogams. It is difficult not to accept the passage pointed out by Hofmeister through *Selaginella* to Gymnosperms and perhaps thence to Phanerogams. But that from *Selaginella* in the opposite direction to Ferns is not so easy, though the interesting discovery by Fankhauser of the mode of reproduction of *Lycopodium* seems to bridge over the interval through *Ophioglossum*. This confirms the relationship which, as Berkeley remarks (*Outlines of Cryptogamic Botany*, p. 549), plainly exists between *Ophioglossaceae* and Clubmosses through *Rhizoglossum* and *Phylloglossum*.

The biologist will one day reap the full result of the labour of the systematist. When all known plants are marshalled by their laboriously ascertained affinities, when the facts of distribution in time and space have given indications of how and where the tide of life has ebbed and flowed on the earth's surface with currents and waves of migrating forms, it will begin to be possible to see clearly the genetic relationship of all these forms and to trace back the streams of life to their common source. "To prove," says Dr. Hooker, "that affinities are genetic and real is one of the deepest problems of nature, the solution of which is to be arrived at through the patient labour of the anatomist and experimenter, which alone can reveal the philosophy of classification" (p. 994).

W. T. THISELTON DYER.

Notes on Scientific Work.

Chemistry.

At the meeting of the *Association Française pour l'Avancement des Sciences* held last month at Lyons several papers of great chemical interest were read. M. Gautier described a new derivative of glucose, $C_{12}H_{22}O_11$ which he obtained by the action of hydrochloric acid gas at 0° on an alcoholic solution of the above body. After these substances have remained in contact at this temperature for twenty-four hours, the liquid is evaporated in vacuo, and the residue, after having been washed with ether, is treated with baryta and repeatedly crystallised from absolute alcohol. The new compound is a white, solid, deliquescent mass which cannot be fermented and reduces the copper solution. It is formed by the union of two molecules of glucose with elimination of water. It is not an ether of glucose, but probably of that class of derivatives from aldehydes to which Wurtz gives the name of aldol. The name of glycadane has been proposed for it by M. Gautier, that of aldane having been suggested by M. Ribot to denote such compounds as furnish aldehydes when they undergo condensation and eliminate water. Glucose, according to M. Gautier, behaves more like an aldehyde than an alcohol. M. Wurtz considers that Gautier's discovery must throw light on the constitution of glucose and explain its double function of a pentatomic alcohol and an aldehyde.—M. Carnot announces the existence in Corrèze of native bismuth along with the oxide and sulphide. The most abundant mineral is the oxide containing about 70 per cent. of the metal. The latter is obtained by dissolving the ore in hydrochloric acid and then precipitating the bismuth with bars of iron. Closely associated with it are wulfenite, scheelite, and mispickel.—M. Friedel described some minerals rich in tellurium from Asia Minor. One species consists of a telluride of gold and silver, containing 21 per cent. of the former and 37 per cent. of the latter metal. Telluride of lead was also met with.—M. Grimaux has proposed for the glycerine, $C_9H_{18}O_3$, formed by the action of water on dibromhydrin the name of stlycerine. It comport itself with formic acid like a polyatomic alcohol in setting carbonic acid free.

The New Saxon Uranium Minerals.—The remarkable group of uranium minerals, which were found in the Weisser Hirsch Mine at Schneeberg in 1871, were submitted to a very careful examination as regards their mineral characters by Prof. Weissbach, of Freiberg, and more recently have been analysed by Dr. Winkler, whose paper appears in the *Journal für Prakt. Chem.*, Band 7, Heft 1. *Uranosphaerite* occurs in brick-red hemispherical masses which decrepitate when heated and break up into acicular crystals with a silky lustre and brown colour. This mineral has the formula $Bi_2O_3 \cdot 2 U_2O_3 + 3 H_2O$. *Walpurgine* when heated to visible redness becomes of a brown colour which on cooling changes to orange; it is a double arsenate of the following constitution:



Trögerite has a yellow colour which changes by heat to a golden

brown and by cooling to a yellow differing somewhat from the original hue. That which has been heated breaks up when moistened with water into small lustrous plates, and a slight development of heat is observed. Its composition is $3 \text{U}_2\text{O}_8 \cdot \text{As}_2\text{O}_5 + 12 \text{H}_2\text{O}$. Zeunerite occurs in fine green pyramidal crystals, which bear a very great resemblance to torberite, and have the formula $\text{CuO} \cdot 2 \text{U}_2\text{O}_8 \cdot \text{As}_2\text{O}_5 + 8 \text{H}_2\text{O}$, or that of torberite with the phosphoric acid replaced by arsenic acid. This discovery led the author to examine the beautiful and characteristic chalcolite of Redruth for arsenic acid, and he found more than three per cent. of that acid replacing phosphoric acid. It is interesting to note that at the Wolfgang Maassen Mine, distant about half an hour from the source of the zeunerite, copper uranite occurs which is free from arsenic. Uranospinite has a pale siskin-green colour, is met with only in very small amount, and has the composition $\text{CaO} \cdot 2 \text{U}_2\text{O}_8 \cdot \text{As}_2\text{O}_5 + 8 \text{H}_2\text{O}$. The lime uranium of Falkenstein was next examined for arsenic acid and found to contain phosphoric acid only. The author in conclusion describes some experiments by which he succeeded in forming zeunerite and uranospinite artificially in crystalline plates.

The Determination of Nitrogen in Albuminoid Substances. A very laborious research has been conducted by Prof. J. Seegen and Dr. J. Nowak (*Pfüger's Archiv*, Band 7) on the surest method of estimating nitrogen in this class of organic bodies, and has led to very important results. They have made altogether nearly forty analyses of albumin, casein, gluten, fibrin, syntoin, legumin and desiccated meat of three kinds, by the two well-known methods, that of Will and Varrentrapp (with and without the use of sugar) and that of Dumas. To avoid the common error of too high a number in the latter process resulting from an imperfect expulsion of the air, they pass carbonic acid for several hours through the combustion tube before heat is applied. They found in every case that combustion with soda-lime gives a lower number than that obtained when the substance under examination is burnt with copper oxide and the volume of nitrogen measured. The discrepancy between the numbers given by the two methods is not the same for each albuminoid substance analysed. It is greatest in the case of albumen, where it amounts to 3·4—3·5 per cent., or more than 20 per cent. of the entire nitrogen, and is least in that of fibrin, where it is 0·7—1·1 per cent. In the analyses of most of the above-mentioned bodies the difference in the number given by the two processes was about 1·5 per cent. or 10 per cent. of the total nitrogen. In the results of the analyses of the meat specimens the disparity amounted to 1·7—2·6 per cent. A considerable portion then of the nitrogen of these substances is not expelled in the form of ammonia by burning with soda-lime. That the use of sugar assists the development of ammonia and consequently raises the analytical percentage has long been known. The authors find that a moderate addition of sugar causes no material increase, and that a quantity at least ten times that of the substance under examination has to be taken to give a number at all approximating to the right one, while twelve to sixteen times the amount of sugar still gives a number short of that obtained by Dumas' method of analysis.

Triferrous Phosphide.—This compound has been prepared by R. Schenk (*Jour. Chem. Soc.*, August and September, 1873, 826) by the action of phosphoretted hydrogen on ferrous sulphate. It is a black magnetic powder which dissolves slowly in acids, either concentrated or dilute, with evolution of phosphoretted hydrogen and hydrogen. When freshly prepared and dry it ignites below 100°. Analysis gave numbers which accord with the formula $\text{Fe}_3 \text{P}_2$. It is interesting to trace as regards its power of resisting the action of acid a resemblance between this compound and the metallic phosphides of meteorites.

Jeypoorite.—A paper by Major Ross on a mineral of this name, from the Khetree copper mines of Jeypoor, in Rajpootana, has been communicated to the Royal Society by Prof. W. H. Miller, the Foreign Secretary, and appears in the *Proceedings*, vol. xxi, No. 144. Twice in this paper Major Ross states that the mineral contains 82 per cent. of oxide of cobalt and curiously enough he twice also tells us that it contains 82 per cent. of cobalt as metal. He gives moreover a complete percentage analysis of the mineral, in which he estimates the whole of each of the three constituent metals to be combined with oxygen, yet there is present, over and above the oxygen, 5 per cent. of sulphur which it is difficult to believe could likewise be in combination with any one of them. He describes this mineral as "a Sulph-antimonial Arsenide of cobalt," a name which signifies a compound of sulphide of cobalt with sulphides of antimony and arsenic, although according to his own analysis Jeypoorite contains altogether over twenty per cent. of oxygen. It will not a little astonish any mineralogist who may peruse this paper to find that these crystals described as "metallic" contain more than one-fifth their weight of oxygen.

The current number of *Silliman's Journal* contains a translation of Prof. von Rath's obituary notice of Gustav Rose.

Geology.

The Ancient Glacier of the Aubrac Mountains, Lozère, France.—M. G. Fabre communicates to the French Academy of Sciences (*Comptes Rendus* vol. 77, p. 495), a note on the existence in the quaternary epoch of a great glacier in the Aubrac Mountains, Lozère,

France. These mountains constitute an extensive slightly undulating granitic plateau with a mean height of 1,200 mètres; Mounts Dore, Cantal, and Lozère, upon which traces of ancient glaciers had been already observed, attaining an altitude of over 1,700 mètres. The Aubracs are drained on the north side by the river Bès, the lower part of the basin of which forms a large cirque. All the low granitic plateaus of the communes of Marchastel, Nasbinals, and Recoules d'Aubrac are covered with an unbroken sheet of hardened argillaceous mud enclosing striated and polished blocks of basalt. This is the *moraine profonde* of the great Bès glacier. Between Nasbinals and the bridge of Recoules, the parish road traverses a very thick deposit of moraine matter entirely hiding the subjacent granite. Near the hamlet of Congoussac are two blocks of basalt, each more than two mètres in diameter, perched upon the summit of a *moutonnée* boss of granite. These blocks accompanied by a multitude of basaltic pebbles, more or less angular and often striated, form part of a long train of erratics extending from Gramon to Escudières. All the basalt was detached and brought from the Peyrou mountain, a distance of 26 kilomètres. The departmental road is cut through the right lateral moraine for a distance of four kilomètres, and exhibits the basaltic and granitic pebbles enclosed in a hard grey argillaceous mud from five to six mètres in thickness. At the time of its greatest extension the Bès glacier sent off a branch to the valley of Simières. One of the lateral moraines of this branch has been exposed for a length of 1,200 mètres, and the terminal moraine forms at Moulins de Simières a barrier across the valley 20 mètres in height. This glacier affords additional evidence of the universality of the great phenomena of the quaternary epoch.

The Trachytes of Hungary and Transylvania.—Dr. C. Doepler, who has recently visited Tokay and Eperies, gives in a letter to Prof. G. Leonhard (*Neues Jahrbuch für Mineralogie*, 1873, part iv., 397) a sketch of his examination of the augite and hornblende andesites which break through the rhyolites of that district. The augite andesite, which is extensively distributed through the Hungarian and Transylvanian trachytes, is here compact, and of a black colour, the ground-mass being often glassy like pitchstone. The felspar is in a fine state of division and only to be recognised with the naked eye in weathered specimens. Under the microscope augite is seen to be a constant constituent, hornblende being either entirely wanting or very sparsely distributed. This rock in a decomposed condition constitutes the matrix of the precious opal at Czervenitz, and of the common opal at Telkibanya. The hornblende andesites are not so widely distributed. They are mostly compact, with a black ground-mass, small yellowish crystals of felspar and greenish-black hornblende being visible on weathered surfaces, while under the microscope a little augite is sometimes to be discerned. Near Tokay a rock consisting of plagioclase, hornblende, and quartz occurs, which however does not in any way resemble the quartz-trachytes or dacites of Transylvania. A quartz-bearing augite-andesite, hitherto unknown either in Hungary or Transylvania, is also met with here. Northward of Eperies a hornblende-andesite is found containing crystals of a brownish-red garnet. The sandine-oligoclase-trachyte of Zirkel and Roth pass into the sandine trachyte here and therefore form no special division. Doepler is of opinion that it is unwise to attempt to classify these rocks until they have received a more extended mineralogical and chemical investigation.

The Volcano at Climbach near Giessen.—After a careful survey of the Aspenkippel, at Climbach, near Giessen, Dr. A. Streng and K. Zöppritz have arrived at the conclusion that it is a true volcano which was in full activity towards the close of the tertiary period. It lies on the western border of the basalt sheet which spreads from the Vogelsgebirge to the Lahn valley, and probably contributed to this great outflow. The basalt directly overlies the oligocene and miocene in places. The basalt of the vicinity of Climbach is represented by tuffs and slaty breccias, and the former are covered with a well defined deposit characterised by the presence of fragments of basalt and layers of dyosidite, probably of quaternary origin. The basalt is dark blue or black and encloses small crystals of olivine and augite. Under the microscope it is seen to consist of a very fine ground-mass enclosing large clear crystals of unaltered olivine, a granular aggregate of this mineral, crystals of a plagioclase felspar and augite, while some colourless portions appear to be filled with an amorphous or vitreous material. A vesicular basalt of a brownish or clear grey colour, much decomposed, is met with on the south side of the crater, the slaty breccia being found in large masses on the east side. The latter consists of fragments of basalt and Bunter sandstone cemented together by the tuff, and sometimes enclosing an amorphous brown mineral in appearance like palagonite, analysis however showed it to be more nearly related to bole. The basaltic tuffs are distinctly bedded and lie in a horizontal position. They consist of fragments of basalt, both compact and porous, Bunter sandstone, and quartz, accompanied by some crystals of hornblende and augite, the whole being cemented together by a palagonitic material. To judge from the few sections seen the basalt rests immediately on tertiary limestone, and is succeeded by the basaltic tuff and slaty breccia. (*Jahresbericht d. Oberhessischen Gesellschaft für Natur und Heilkunde*, 14, 30.)

The Structure of Obsidian.—In a letter which appears in the *Fahrbuch für Mineralogie*, 1873, part iv., 394, A. Kenngott describes the characters of some obsidians from Iceland. Thin sections exhibit numerous spherical cavities, and occasionally very small brownish-black opaque spherules, which are surrounded by a number of small acicular brownish-black crystals about equal in length to half the diameter of the spherules, from which they appear to radiate. In one section the spherules are arranged in a straight line without the usual acicular crystals, and each exhibits an opaque black nucleus surrounded by a brown transparent and relatively thick crust. Near the spherules in the same section are some peculiar groups of acicular black crystals, which for their whole length and on both sides are covered with short black needles lying parallel to each other, and making with the parent crystal an angle of about 60°. There are moreover a few oval or occasionally cylindrical structures which are likewise surrounded by numerous long colourless needle-like crystals. Similar needles occur in isolated groups without any nucleus and crossing each other at every possible angle. These groups constitute the bulk of the minute white specks distributed through the obsidian; those seen by the naked eye have an irregular outline and are clear and pale-blue under crossed Nicols like the sanidine plates in the black obsidian from Ararat. Colourless crystals of orthoclase, lengthened in the direction of the vertical axis, are also present.

Botany.

Origin of European Tertiary Flora.—Lesquereux in the third report of the United States Survey of Montana concludes that the European Tertiary flora partly originated from Arctic North America. He gives the following summary of his views:—1st. The Tertiary flora of N. America is by its types intimately related to the Cretaceous flora of the same country. 2nd. All the essential types of our present arborescent flora are already marked in the Cretaceous of our continent, and become more distinct and more numerous in the Tertiary; therefore the origin of our actual flora is like its facies, truly N. American. 3rd. Some types of the North American Tertiary and Cretaceous flora appear in the same formations of Greenland, Spitzbergen, and Iceland; the derivation of these types is therefore apparently from the Arctic regions. 4th. The relation of the North American Tertiary flora with that of the same formation of Europe is marked only for N. American types, but does not exist at all for those which are not represented in the living flora of this continent. Therefore the European Tertiary flora partly originated from N. American types, either directly from our continent or derived from the Arctic regions. 5th. The relation of the Tertiary flora of Greenland and Spitzbergen with ours indicates, at the Tertiary and Cretaceous epochs, land connection of the northern islands with our continent. 6th. The species of plants common to the Cretaceous and Tertiary formation of the Arctic regions and of our continent indicate, in the mean temperature influencing geographical distribution of vegetation, a difference in + equal to about 5° of latitude for the Tertiary and Cretaceous epochs. 7th. The same kind of observations on the geographical distribution of vegetable species shows at the Tertiary and Cretaceous times a difference of temperature according to latitude, analogous to what is indicated at our time by the characters of the southern and northern vegetation.

Floral Symmetry of Cruciferae.—The reduction of the flowers of the Cruciferae to a symmetrical type has repeatedly engaged the attention of morphologists. Moquin Tandon regarded the four long stamens as representing a pair which had been multiplied by a dédoublement. Mr. Bentham, who is the only British botanist who possesses the rare accomplishment of a familiarity with the Russian language, points out in his recent address that Meschaff (Bull. Soc. Imp. Nat. Mosc.) has pushed the explanation of Moquin Tandon to its furthest limits by regarding the four petals as also the result of a dédoublement of a single pair, thus reducing the whole flower to a dimerous symmetry, the different whorls decussating with each other.

Distribution of Pollen and Spores in Air.—Mr. Blackly, in a book entitled *Experimental Researches on Hay Fever*, has been incidentally led into an investigation of the amount of pollen present in the air. He began with that of a meadow at the average breathing level (four feet nine inches from the ground). Mr. Blackly's results are not without their interest as showing what an active agent the wind must be in effecting cross-fertilization. The observations were commenced in April and continued till the end of July. A slip of glass was exposed horizontally coated with a thin layer of a non-drying liquid. He tabulates the daily results; and the highest number of pollen grains obtained on a surface of a square centimetre in twenty-four hours was 880 on June 28. Sudden diminutions in the quantity of pollen—when these occurred in the ascending scale between May 28 and June 28—were invariably due to a fall of rain, or to this and a fall in the temperature. Mr. Blackly then proceeded to examine the amount of pollen to be found in the higher strata of the atmosphere. This was done by means of a kite which by being attached to other kites sometimes attained an elevation of 1000 feet. The pollen was found to be much more largely present at the

upper levels than at the "breathing level." Taking the average of the quantities where pollen was present at both levels, he found that whilst the average for the ordinary level was 24 only, for each experiment, that for the higher levels was 472.33, or more than nineteen times as much. After making due allowance for the difference in the velocity of the air at various altitudes, there still remains a great preponderance unaccounted for in the amount of pollen in the upper strata. Mr. Blackly remarks that his experiments also afforded abundant proof of the presence of fungoid spores in the air in large quantities. In one experiment which lasted four hours, and in which the number of pollen grains collected at an altitude of 1000 feet was over 1200, the spores of a cryptogam, probably *Ustilago setigera* were so numerous that he could not count them. At a rough estimate they could not be less than 30-40,000 to the square inch. A fact like this makes the ubiquity of fungoid organisms a thing easy to comprehend.

That these organized contents of air travel to a considerable distance was proved by a series of experiments made in the outskirts of Manchester, but within the boundary of one of the most densely populated parts, and in no direction within less than one third of a mile of grass land. The quantity of pollen was only about one tenth of that collected in the country.

Physiology.

The following are brief summaries of the most important papers read in the Department of Anatomy and Physiology at the Bradford Meeting of the British Association. Prof. Ferrier, of King's College, London, gave an account of the results he has obtained by direct stimulation of various parts of the surface of the brain by Faradic electricity. The animals used for experiment (while under the influence of chloroform) were the cat, dog, jackal, monkey, rabbit, &c. The general effect of irritation of the surface was to produce muscular movements, and these could be predicted by Dr. Ferrier with almost complete certainty. The experiments have now been witnessed by judges sufficiently numerous and competent to place their accuracy beyond doubt, though of course they need extension and interpretation in many directions. It also remains to be explained how it was that earlier experimenters obtained negative results from irritation of the cerebral convolutions, and that even Fritsch, though he to some extent anticipated Dr. Ferrier in similar observations on the effect of galvanism, failed to obtain any movements with the interrupted current. The most important results in the inquiry as yet obtained seem to be: 1. That the areas of surface physiologically distinct are remarkably small, sometimes not above the third of an inch in diameter, so that it needs great care to confine the action of the electrodes to a single one. 2. That several regions when stimulated produce no (motor) phenomena: and this is particularly the case with the anterior part of the frontal lobes, which is probably peculiar to man and monkeys. 3. That the movements produced affect several muscles in groups, and that their contractions are so correlated as to cause the performance of definite operations, such as screaming, mewing, or barking, stretching out the hand for prehension, drawing up the lips and opening the mouth for fighting, pricking the ears and turning the head for listening, and so on. 4. That, speaking generally, stimulation of the upper frontal convolutions affects the facial muscles, of the parts behind and below those of the fore limb, further back, the hind limb, while the cerebellum appears to affect the ocular muscles. 5. That the movements are crossed, with one or two exceptions, the explanation of which confirms the rule. 6. That the supposed seats of emotion indicated by these experiments do not at all agree with those empirically laid down in the once popular system of so-called Phrenology.

A second important paper was by Prof. Burdon Sanderson, of the "Brown Institution," in the University of London, who has found that the movements of Venus's fly-trap produce electrical variations corresponding with those long known in muscle which give rise to the condition of electrotonus.

A third communication was from Dr. McKendrick and Mr. Dewar of Edinburgh, who have succeeded in shewing that the stimulus of light on the retina produces electric variation in the optic nerve. This result, which has been long suspected and was rendered more than probable by Du Bois Reymond, has now been placed on a surer basis, and the objections which might naturally arise from interference of muscular currents, from the action of heat, etc., appear to have been all satisfactorily met. But perhaps the most interesting part of the inquiry is that the results are in complete correspondence with those which would follow from the application of Fechner's celebrated law, deduced as is well known by mathematical processes and now confirmed by the results of direct experiment.

Joseph Barclay Pentland, who died in July last at the age of seventy-five, laboured hard in the field of scientific discovery, as a geologist and geographer. Sent, in 1827, as secretary to the Consul of Peru, and afterwards appointed Consul-general to Bolivia, he availed himself of the opportunities his position afforded him of surveying these elevated regions. He measured the peaks of the Peruvian Cordillera of the

Andes, and was the first to ascertain that Chimborazo was not the highest summit of the Western hemisphere, but must yield in elevation to Sorata and Illimani, mountains of the eastern Cordillera of Peru. Mr. Pentland also took an elaborate survey of the great lake of Titicaca, whose borders were the ancient seat of Peruvian civilisation; his map was published by the Admiralty, but he never could be induced to write the history of his travels.

The intimate friend of Cuvier, Humboldt, Arago, and Elie de Beaumont, Mr. Pentland passed much of his life in Paris. His winters he spent in Rome and he edited the Handbooks of Italy and Rome, for his friend Mr. Murray, the publisher.

New Publications.

- BOURGEOIS, M. l'abbé. Note sur l'Amphimoschus ponteleviensis. Paris: Bouchard-Huzard.
- CLAUSIUS, R. Ueber einen neuen mechanischen Satz in Bezug auf Stationäre Bewegungen. Bonn: Georgi.
- COMBES, J. L. Note sur l'origine et la formation des minéraux de fer du Haut-Agenais (Lot-et-Garonne) et des phosphates de chaux de Quercy. Agen: Noubel.
- DARBOUX, M. G. Sur une classe remarquable de courbes et de surfaces algébriques et sur la théorie des imaginaires. Paris: Gauthier-Villars.
- DOELTER, C. Ueber das Muttergestein der böhmischen Pyropen. Wien: Gerold's Sohn.
- HAMPE, E. Flora Hercynica, oder Aufzählung der im Harzgebiete wildwachsenden Gefäßpflanzen. Halle: Schwetschke.
- KOCH, L. Übersichtliche Darstellung der europäischen Chernetiden (Pseudoscorpione). Nürnberg.
- LORING, Hon. G. B. Speech on the Museum of Comparative Zoology, in Senate, March 26th, 1873. Boston.
- MAREY, E. J. La machine animale. Paris: Bailliére.
- MEEHAN, T. On the Agency of Insects in Obstructing Evolution. Philadelphia.
- NOUVEL, M. E. Les plantes de la guerre. Note sur les plantes étrangères observées aux environs de Vendôme à la suite de la guerre de 1870-1871. Vendôme: Lemercier.
- PACKARD, A. S. Catalogue of the Pyralidae of California, with descriptions of new Californian Pterophidae. Salem (Mass.).
- PACKARD, A. S. Synopsis of the Thysanura of Essex County, Mass., with Descriptions of a few Extralimital Forms. Salem (Mass.).
- PLAUCHON, J. E., et LICHENSTEIN, J. Le Phylloxera (de 1854 à 1873). Résumé pratique et scientifique. Montpellier: Coulet.
- RELIQUIAE AQUITANICAE. Part XIII. Williams & Norgate.
- SERPIERI, A. Nuove osservazioni sul terremoto avvenuto in Italia il 12 marzo, 1873. Milano: Bernardoni.
- SMITH, J. L. Mineralogy and Chemistry. Louisville: Morton.
- SNELL, C. Nicolaus Copernicus. Jena: Frommann.
- THIELENS, A. Voyage botanique et paléontologique en Eisel. Bruxelles.
- THOMSON, C. G. Hymenoptera Scandinaviae. Tom. II. Stockholm: Bonnier.
- TÖRNBOHM, A. E. Ueber die Geognosie der Schwedischen Hochgebirge. Stockholm: Bonnier.
- VOM RATH, G. Gustav Rose. Bonn.
- VON HOFFINGER, D. Zur Erinnerung an Wilhelm R. von Haidinger. Wien.
- WESTERLAND, C. A. Fauna molluscorum terrestrium et fluviatilium Sueciae, Norvegiae et Daniae. Tom. II. Stockholm: Bonnier.
- ZEUTHEN, H. G. Almindelige egenskaber ved Syetemer af plane Kurver. Kjøbenhavn.

Philology.

Modern Greek Miscellany. [Νεοελληνικά Ἀνάλεκτα, περιοδικῶς ἐκδόμενα ὑπὸ τοῦ Φιλολογικοῦ Συλλόγου "Παρασσοῦ." Τόμος Α'. Ἐν Ἀθήναις 1870-72.]

THE Philological Society *Παρασσοῦ* at Athens has established a claim to the gratitude of all students of modern Greek literature by the publication of their excellent *Νεοελληνικά Ἀνάλεκτα*, the first volume of which is now ready before us. It contains the most authentic and unalloyed records and documents of the national life of the Greek nation in its present phase: we receive here Greek fairy-tales in the original text (which adds not a little to their charm), a new collection of popular songs and amorous distichs, a very original one of enigmas and riddles, a series of treatises on points of Greek superstition and usages, and lastly a glossary of the Lesbian dialect annotated by Dr. M. Deffner, a young

German scholar who seems to have fixed his abode at Athens after having completed his studies at Leipzig under G. Curtius and Ritschl. The *έπιλογος* added to his notes on the glossary is highly instructive (though consisting for the most part of a mere application of sound philological method to the study of modern Greek, which, as Dr. Deffner justly observes, has hitherto been more studied by amateurs than by trained scholars), and in many parts continues and supplies the same writer's *Neograeca*, a treatise published in the fourth volume of G. Curtius' *Studien*. It would have been more convenient if Dr. Deffner had referred to the paging of his *Neograeca* in Curtius' collection instead of quoting a separate paging of his own; we have found it very troublesome always to verify his citations. The general tendency of the whole volume is to trace the Greece of old in the modern country, but to do so in a manner at once upright and convincing by producing the people such as they are, in habits, usages, and speech. We agree, however, with Dr. Deffner that the popular speech of the modern Greeks is the strongest evidence in favour of their descent, and that it will be difficult to uphold much longer the well-nigh antiquated theory of a complete extirpation of the Hellenic race, in the face of such linguistic facts as are being gradually collected by the industry of scholars. We would draw attention to the observations of Dr. Deffner in which he endeavours to show that the unalloyed speech of the people—that speech which the blind Atticists of our day despise and the λόγιοι attempt to supersede by a cold and artificial dialect—contains formations evidently older than the Attic dialect itself. In reading such evidence we were reminded of the words of the late Prof. Mavrophrydes in his excellent History of the Greek Language, p. 23: *Ικανὰ ἔπαθεν οὐ γλωσσα ἐκ τοῦ ἄκρων ζήλου τῶν ἐπὶ οἰκωκαίσκεα αἰώνας ἀπτικιστῶν ἢ ἂς μὴ τὴν ὑσχημάσον περισσότερον νοεῖ σπαραγμοί.* The present Greek language is not, in fact, the daughter, but rather the younger sister of ancient Greek, and why should it lose all its characteristic peculiarities, those very features which declare it to be the *νεωτάτη φάσις τοῦ ἐλληνισμοῦ* (Mavrophr. p. 30), and submit again to the lifeless and extinct forms of Attic grammar? But to return to the work before us: little as the compilers of this volume aim at any dogmatism, we think that a single fairy-tale in its naive freshness is more attractive than an elaborate and polished composition in the literary dialect, and are grateful to the Society for making these documents of national speech accessible to us. A feature frequently met with in these tales is the fondness for riddles and clever sayings, which appears also so conspicuously in the later period of the ancient Greek literature, e.g. in the history of Apollonius of Tyre. We are aware that much material may be added to the notes of the editors on these tales, and many evident analogies of these Greek tales with those of other nations have been overlooked by them. A fox eating grapes is known to us from the well-known Aesopian fable, but it is surprising to find this phenomenon of natural history as the representative of our old friend Puss in Boots, as we do in the tale entitled ὁ ἀφέντης ὁ Τριορρωγᾶς (p. 14-16), "The gentleman of the three grapes." The termination of this tale is remarkable for its ingenuity. The last word of it was at first unintelligible to us: *τὸν ἀποταύφχιασε*, but we subsequently found it explained in a note on another tale, p. 33, as *ἐλέγχω ἐημοσίᾳ τινὰ πράξαντα κακόν τι*, yet the derivation appears to be obscure: at least we cannot believe that this expression comes from ἀποκύπτω. The word *ἀκαμάτης* which is explained in the Lesbian glossary, p. 387, occurs in the same tale, p. 14, and perhaps it would have been useful to refer to this, inasmuch as it shows that the word is not confined to the dialect of Lesbos. Altogether it would be easy to collect linguistic peculiarities from these tales and poems. We find

τὸ βίος “res familiaris,” p. 16, for the neuter use of which we may compare *τὸ πλωῦτος* in the language of the New Testament and in modern Greek, and the ancient Greek ὁ and *τὸ σκότος*. We read ἀγάγκων p. 121, and ἀξπόλυτος p. 27, 152, 189, both being evidence of the preposition *ἄχ*, of which we hope to speak at a future time in the *Academy*. The form *ἄχ* occurs in a popular song, p. 70 : μὴν ἄχ τὰ χιόνια τὰ πολλά, μηνα κι ἄτ’ τὸ χαλάρι where we may easily suspect that *ἄτ* ought also to be *ἄχ*. The adj. *θεώρατος* is explained *πελώριος* p. 17 : but as it stands no doubt instead of *θεώρατος* (cf. p. 47, 53), we should rather think that it means “visendus” = *διέθεος* in Alciphron. The form *μηνᾶ* which is so frequent in mediæval compositions (= *μηνί*), occurs p. 133, 253. In his note on the Lesbian meaning of ὥργον (= *βαρβακερὸν νῆμα*), Dr. Deffner ought to have mentioned the modern ὥργαλειός “spinning wheel.” We agree with the same scholar in rejecting the explanation of the mysterious initial *ν* in *νουκούρα, νύτνος, νώμος* as a digamma (p. 412, cf. 457), but we cannot suggest another explanation. For the word *vivī* “baby” (p. 413) we would compare the well-known English *ninni*, the Italian *ninno*, and believe that there was a Greek word *νερός* = *μωρός*. It is common to use *τὸ μωρό μου* in the sense of “my little one.” We are also glad to see that Dr. Deffner rejects Koraës’ derivation of *ῥίχνω* “I throw” from *ῥήγνυμι* (K. of course also proposes to write *ῥίχνω*) : in a paper printed in the *Trans. of the Phil. Soc. in London*, 1867, the present writer had endeavoured to establish *ῥίχνω* and *ῥίπτω* as parallel forms of the same root. But *ῥήγνω*, 458, is direct from *ῥήγη*—and therefore a later derivation than *βραχίνει*, which clearly comes from the earlier form of the root, *ῥαγη*. Dr. Deffner says: ή ἀλλαγὴ τῶν αἱς η ἐν εἶναι σπάνιον τι εἰς τὴν ιων ἐαιλ., but he does not prove *ἄ* = *η*. We would finally draw attention to the peculiar and rare use of *τοῖς* as an acc. (corresponding to *ταῖς* as acc. in the first decl.) in a proverb p. 181 :

οἱ πολλοὶ δὲν εἰν’ καλοί,
μόν’ σαν τοι ἔχης τὸ φαῖ.

At present I can quote only one other instance of this form from a popular song edited by Legrand in No. 12 of his Collection (see his Preface p. 5 sq.). We will end with the question whether *μπάγες* (411) = οἱ ὥργον καὶ νεώτατος ταῦπος may be traced to *μπάνων* in the sense of *ἔπιβαίνων*.

We refrain from producing more details, but once more recommend this interesting volume to all students of modern Greek. If we may venture to offer some advice to the Society, we would counsel them in future to employ greater care in revising their proofs—only the last number (edited by Deffner) is tolerably free from errors of the press.

W. WAGNER.

The *Complaynt of Scotland*, A.D. 1549 ; with an Appendix of four contemporary English Tracts ; re-edited from the originals with Introduction and Glossary by J. A. H. Murray. (Early English Text Society.) Trübner and Co.

PERHAPS the reader of Scott’s *Lord of the Isles* may recall to memory the lines—

“ Quenched is his lamp of varied lore,
That loved the light of song to pour:—
A distant and a deadly shore
Has Leyden’s cold remains.”

Such is the fitting epitaph upon the poetically-minded and studious author of *Macphail of Colonsay, and the Mermaid of Corrievrekin*, whose early death at Java was so sincerely lamented. Amongst other things, we are indebted to Dr. John Leyden for the edition of the *Complaynt of Scotland* published in 1801, copies of which are very scarce, as only 150 were printed. To Mr. Murray we are now indebted for a reprint of this, corrected in a few necessary

instances by help of the originals in the British Museum. We cannot help congratulating the reader upon the fortunate circumstance that the duty of reprinting and re-editing has fallen into such excellent hands; for Mr. Murray’s careful introduction and glossary leave nothing to be desired. He has done well to incorporate the remarks of Dr. Leyden in his own account, wherever those remarks seemed in any way worth preserving.

It is not very clear who was the author of this curious book. It has been attributed to Sir James Inglis, Sir David Lyndesay, and to one Wedderburn. Respecting the first name, Mr. David Laing has discovered two owners of it. One of these was abbot of Culross, and was murdered in 1531, eighteen years before the *Complaynt* appeared; so that the author clearly was not he. But there was another Sir James Inglis who, from about 1508 to 1550, was chaplain of the Abbey of Cambuskenneth, and, though he must have been upwards of sixty years old in 1549, his claim is more difficult to disprove. The internal evidence shows conclusively that it is not Sir David Lyndesay’s. But in the Harleian Catalogue the book is twice set down as “Vedderburne’s Complaynte of Scotland,” and, though there is nothing to show what authority there was for the assertion, we agree with Mr. Murray that it is very likely to be correct, as the name Wedderburn is of frequent occurrence, and there seems to be no reason why it should have been mentioned in so explicit a manner unless the compiler of the Catalogue had some good reason for it; in the shape, probably, of a note now lost. However, we quote Mr. Murray’s opinion on the subject. “The only things,” he says, “I consider certain as to the author are (1) that he was a distinct and thorough partisan of the French side; (2) that he was a churchman, still attached to the Catholic faith; (3) that he was a native of the Southern, not improbably of the Border, counties. Sir David Lyndesay is peremptorily excluded from consideration; no less so, I think, is Wedderburn, vicar of Dundee; in lack of further evidence, the claims of Sir James Inglis of Cumbuskenneth, and of some unknown priest of the name of Wedderburn, are equally balanced, though, if the part of Mackenzie’s Life which calls Inglis a Fife man belongs to this Inglis, the evidence of dialect would be against him.” Like Mr. Murray, we incline to the “Wedderburn” theory; chiefly, perhaps, because there is nothing against it, and one small piece of positive evidence in its favour.

In discussing the language of the work, Mr. Murray, himself the author of a book on the Dialect of the Southern Counties of Scotland, is particularly at home and trustworthy. It is a great comfort to find him leaving alone all petty squabbling about a Scottish as distinct from an English language, and boldly stating the broad fact that, before the year 1450 at any rate, the language of Lowland Scotland was originally identical with that of England north of the Humber. Until this fact be clearly perceived and thoroughly accepted, we shall never gain any clear ideas on the subject. Whether we give to the old language of the whole district between the Forth and Humber the name of old Lowland-Scotch or of old Northumbrian is a matter of very secondary importance, and a mere question of convenience, so long as it is seen to be all one. We are not discussing a question of nationality, but of philology; and it is only because old Northumbrian is the more convenient term that we incline to the use of it. And it is more convenient, because we are already familiarised with the notion of including Lothian in Northumbria, but not with the notion of including Yorkshire in Scotland. One thing has considerably tended to darken the matter; and that is, the very changeable way in which the word *Scottish* has been applied;

the meaning of the word at one date is not the same as its meaning at another. In fact, in this point as in all others where philology is concerned, chronology has to be much considered. If, indeed, there be a study which, in English philology at least, has been completely ignored, it is that to which we would give the name of the Chronology of Etymology. We trust our readers will make a note of this; for we make bold to say that if, henceforth, the *Chronology of Etymology* could be once admitted as a *leading and necessary principle* of English etymology, one half of the false derivations would speedily go by the board. It has been dimly recognised by most of our best students; but, by those who have only a limited knowledge of etymology, and who are, on that account, constantly suggesting new derivations which they cannot *themselves* perceive to be absurd, it has always been, and will continue to be, persistently ignored. It is not enough to suggest that such a word or phrase might be derived from such another word or phrase; it is also required that the word said to be the original is truly the older form, and that the change in spelling is such as, in accordance with the known history of the language, may reasonably have taken place. An example will perhaps place this in a clearer light. There is a provincial word *chare*, which in Newcastle means a narrow street or by-way; it is identical with the Wiltshire *chore*, which means a narrow passage between two houses, and with the Midland form *chure*, meaning a passage, by-way, or turning out of a larger road. Now there is nothing absurd in deriving this from the A.S. *cerre*, *flexus*, *vie deflexio*, *diverticulum*, *anfractus*, as Lye explains it, because we know that the verb *cerran*, to turn, with the variable spelling *cyrran*, was used in England before *chare* was; and that the change of *c* into *ch* satisfies the Chronology of Etymology. We have a like instance in what is, possibly, the same word in another sense, viz. the word *chare*, a turn of work, certainly derived from A.S. *cerran*, and preserved in *char-woman*. But our point is, not that we assert this derivation to be the right one, for it is still a little uncertain, but that it is a possible one; since it satisfies—if we may be excused for repeating the phrase—the Chronology of Etymology as well as the History of the Language. Yet when, not long ago, the Midland word *chure*, a passage, was proposed for etymological solution in *Notes and Queries*, what happened? Immediately two writers came forward with the positive reply, that it was clearly the German word *thür*, a door! But what wild work is here! How do we know that, chronologically, the German *thür* ever existed in England before *chure*? Indeed, we may ask what proof is there that High German was ever spoken, in olden times, in the Midland Counties? If an Englishman knew what a *door* was, why should he trouble himself to pronounce it *chure*? It is time to put aside such puerilities as these; we must no longer be misled by mere similarity of sound, but we must satisfy all the requirements of chronology and history. Little as we know of the exact history of all the successive changes in our language, surely we know enough to avoid such odd blunders as this. But such is English “etymology” in 1873.

This digression has been suggested by the sound ideas which Mr. Murray holds regarding “Scottish,” and merely with the view of more forcibly showing the necessity of attending to dates. The language of the *Complaynt* belongs to the “Middle-Scotch” period, and is classed with that of the works of Bellenden, Gawain Douglas, and Lyndesay. Mr. Murray’s statement respecting the apparent locality of it is very interesting. He says: “While I cannot read ten lines of Lyndesay without having it forced upon me, as a native of Roxburghshire, that his form of Scotch is not mine, I have everywhere found the language of the *Com-*

playnt familiar as the tones of childhood, and ever and anon have been surprised at the sanction which it gives to forms or idioms which I had thought to be modern vulgarisms of the local patois, but which are thus shown to have a pedigree of three and a half centuries to plead.” We may therefore put down the work as an example of the Roxburghshire variety of the Middle-Scotch period. Let us beware, also, of too hastily assuming that provincial words, however vulgar, are of modern formation. We must not omit to notice the great number of French words which abound throughout the work, owing to the intimate connection in that age between France and Scotland.

The object of the work was to issue a strong appeal or “exhortation” to the three estates of the realm, the nobility, spirituality, and commons, in order to awaken them to a consideration of the gravity of their position; in the hope that they might be induced to forego their civil bickerings and debates, to cultivate unanimity amongst themselves, and to make common cause against England. The most interesting point is, that something like a more satisfactory state of things seems to have come about nearly at this time; due, no doubt, as Mr. Murray says, to the treaty between England and France made in 1550; one result of which was that the author, feeling somewhat more satisfied in his mind and less anxious to confine himself solely to matters political, went so far as to add to his work a very curious chapter (in fact the one by which it is best known) which he entitles “Ane Monolog of the Actor,” or, as it may be called, “A Monologue Recreative of the Author”; see pp. 37-68. This is certainly a very singular production. He describes how, being weary, he walked abroad in the fields till sunset on a certain 6th of June, continued walking about all night, and then beheld the daybreak. Then comes his famous description of dawn, how beasts and birds of every sort began to make peculiar noises, each after its kind. “The bullis began to bullir, quhen the sheep began to blait, be cause the calfis began till mo, quhen the doggis berkit.” And so it goes on at some length, telling us the right names for all the various animal sounds. Thus we find that the ass roared, the hens cackled, the cocks crew, the chickens “pewed,” the glede (kite) whistled, the geese cried “clack,” the goslings “quihilk,” and ducks “quack.” The cranes “crooped,” the crows said “warrok! warrok!” the swans mourned, the turtles greeted, the cushat yowled, the dove “crooded her sad song that sounded like sorrow” (no bad alliteration), the swallow jargled, and the jay jangled. The lapwings cried “thieves neck!” whilst the pies clattered. The sparrow cheeped, the ousel yelped, the goldfinch chanted, the red-shank cried “my foot! my foot!” and the ox-eye tomtit cried “twit!” The herons gave a wild screech as if the kiln had been on fire. Then the author went down to the sea-shore, where, gazing across the flood, he saw a galliasse appointed for war. He then describes at length the weighing of the anchor and the unfurling of the sails, specifying all the cries used by the mariners during the operations. Then the guns are got ready for action; the order given being—“Gunners, come here and stand by your artillery, every gunner to his own quarter. Make ready your cannons, your culverin ‘moyens,’ culverin bastards, falcons, sakers, half-sakers, half-falcons, slangs and half-slangs and quarter-slangs, head-sticks, murderers, passevolans, berches, dogs, double berches, hackbutts ‘of croche,’ half-hacks, culverins, and hail shot. And ye, soldiers and companions of war, make ready your cross-bows, hand-bows, fire-spears, hail-shot, lances, pikes, halbards, rondels, two-handed swords and targes.” Then follow the noises made by the various pieces of artillery. Then the author returns to the fields, sees some shepherds, and describes all that

they had for breakfast. He next lectures them on the excellence of a pastoral life, quoting all manner of examples, from King David to Amphion, and from Abraham to Paris, son of Priam. Next he gives a small treatise on astronomy, explaining the primum mobile, the meridian, the colures, &c., carefully proving the existence of antipodes. He goes on with the planets, the comets, and meteorology. After this, he cites the names of all kinds of tales and romances, the Canterbury Tales, the Wallace, the Bruce, Arthur, Bevis, Pyramus and Thisbe, and many more; next, of numerous songs, as "King William's Note" and the "Hunts of Cheviot;" next, of dances, as "the hunt's up," the lamb's-wind, the shake-leg, the shake-a-trot; next, of flowers, as "barba aaron," water-lily, hemp, celandine, &c., &c.; after which he expresses himself as "beand contentit of that pleysand nyctis recreatione," as well he might be. It will of course be understood that we have modernised the spelling considerably; it is singular that the present work is far harder to read than the older Northumbrian of Barbour.

The Appendix contains (1) the Just Declaration of Henry VIII., A.D. 1542; (2) the Exhortation of James Harrysone, Scottishman, 1547; (3) the Epistle of the Lord Protector Somerset, 1548; and (4) the Epitome of Nicholas Bodrugan, alias Adams, 1548. These all help to illustrate the main part of the work. The Glossarial Index "aims at registering all the words which differ in spelling or usage from modern English," and occupies forty pages. Such indices are very valuable; it is only by compiling a considerable number of them, to be afterwards combined, that we can lay the foundation of a good General English Dictionary.

WALTER W. SKEAT.

PROFESSORIAL DISSERTATIONS OF UNIVERSITY COLLEGE, LONDON.

In *Professorial Dissertations for 1872-3* (University College, London) Mr. Henry Malden has given us a thoughtful, and indeed exhaustive discussion on a long-disputed question, the number of the chorus in the *Eumenides* of Aeschylus. His conclusion is a very reasonable one, that in the prologue, in which the Furies appear upon the stage in the shrine of the Pythian temple, they are there rather as actors than as a chorus, and only three in number. The limitation of the Furies to three was probably, as he says, somewhat later than the mythology with which Aeschylus was familiar: but he also rightly observes that "three was a favourite number in the definite forms of mythology" ("in later times," he need not have added; the Gorgons as well as the Phorcids were *three*, *Prom.* 795-8). It is very probable, and it removes several scenic difficulties to assume, that three principal Furies first appear in the action, and are reinforced, as it were, by twelve more, when they unite in a general chorus. Mr. Malden ingeniously cites *Choeph.* 1057 (Dind.),

ἀναξ Ἀπολλον, αδε τηληθύουσι δῖ,

where he considers the version I had given of *τηληθύουσι*, "they swarm," less correct than "they get more in number." He supposes that Orestes sees only three at first, and then the larger number appear—crop up, as it were—one after the other. In support of his view he might have cited *Eum.* 589,

εἰ μὲν τρόδ' ήδη τῶν τριῶν παλαισμάτων,

the point of which would be (besides the well-known allusion to the "three throws" in wrestling), that one of the three accusing goddesses had already gained her victory decisively.

A good service would be rendered to the history of ancient thought by any one who would investigate the causes why the mystic *Three* has exercised such extraordinary influence in all the mythologies and religions of the world from Homer downwards, where the Triad of Gods is distinctly enunciated (*H. xv. 187*). Even the triple-leaved shamrock survives to this day, as the fleur-de-lis so long prevailed in heraldry, as an emblem of the mystic number.

In the trial scene, Mr. Malden thinks it not unlikely that the three chief Furies ascended to the stage to appear as accusers before the Areopagus, leaving a chorus of twelve on the orchestra. He is probably right. This ascent (*ἀναβάσιν*) from the orchestra to the stage by stairs was certainly adopted in Comedy (e.g. Ar. *Ach.* 732; *Equit.* 149; *Pax* 427, and perhaps *Vesp.* 1342); and there is no reason why the licence should have been withheld from Tragedy.

Mr. Malden, in giving his opinion that the ecclyema was used for exhibiting the interior of the temple of Delphi to the spectators, has

omitted to notice that this is expressly stated by the scholiast (quoted on v. 64 of my edition), and also that the same scholiast on 585 (Dind.) gives the number of the chorus as 15 (*ιε γὰρ ηὐραν*).

With regard to the size of the stage in the great theatre at Athens, Mr. Malden thinks, with A. W. Schlegel, that it was small, and could hardly hold eighteen persons. Yet it seems certain that in the *Agamemnon* the King enters the stage on a mule-car with Cassandra by his side, and doubtless a body of attendants. In the *Acharnians* (156) a sufficient number of persons appear to be called *Οδομάρτων στράτος*,—and that they do really appear, and even show fight to some purpose with Dicaeopolis, is clear from the context.

Nor is it at all certain that either in the *Choephoroe* or the *Persians* the tomb (tumulus) of Agamemnon or Darius was represented by the *θυμέλη* in the orchestra. To make the prologue spoken by the *σπουργαρωτής* in the orchestra is, I conceive, a view neither necessary nor consistent with tragic usage; and I think that both in the *Choephoroe* and the *Electra* of Sophocles the tomb was actually on the stage. This is confirmed by the scene in the *Pax* of Aristophanes, which (if I have rightly explained it in my preface to that play, p. xii.) requires a heap of stones, under which the goddess is supposed to be buried, to be on the stage itself, and also a number of workmen who are engaged with ropes and mattocks in removing them to another part of the stage (v. 361, *ποι τὸν λόφον ἀφέλεσσεν*). If so, it is impossible that the stage could have been very small, though the *λογέων*, or front part of it for the actors when speaking, may have been so.

I doubt whether Mr. Malden has seen the very interesting and beautiful vase-painting that forms the frontispiece to my third edition of Aeschylus. There two furies only are represented in the temple of Delphi, there being, in fact, no room in the group for a third. But the evidence of this drawing, as far as it goes, is decidedly in Mr. Malden's favour.

Mr. R. Ellis has a dissertation, replete with learning and wide research, on some difficult passages of that most obscure of Roman poets, Propertius. In iii. 18, 35 (ii. 26, 35 as he gives it after the old editors), the MS. reading *cum ratis Argo* is defended against the emendation (such it probably is in ed. Ven. 1488) *cum rudis Argus Dux erat*, &c. Mr. Ellis takes *Argo* as the dative of *Argus*, the builder of the ship, and translates, "When the dove, launched on a strange sea, served *Argus* as the guide of his ship." And there seems no valid objection that can be raised against this view. He thinks the mistake arose from the wrong notion that *Argo* meant the ship itself, and therefore required some change in the case.

The legends of the Argonauts were, as he says, very various, and poets by no means agree as to localities. In its origin, I cannot doubt that it represented the voyage of some early adventurers in search of the sunlands, if not of the sun itself, in the far east. This representation of the sun by a golden fleece or phosphoric garment is well known in mythology; and Medea as the granddaughter of Helios fully confirms the view. In a voyage altogether mythical it is vain to identify localities—a remark that applies equally to the wanderings of Io in the *Prometheus* and of Ulysses in the *Odyssey*. It does not therefore, as Mr. Ellis says, "surprise us if we find Propertius using a wholly different account of the passage of the Symplegades from that of Apollonius."

A much more difficult passage is in iv. (iii. Barth.) 7, 21 seqq., where the "Argynni poena" is rendered very obscure by the corruption of the end of the verse into "minantis aquae." The reading adopted by most editors, "Athamantidae," though at first sight a plausible conjecture, seemed to me so unrhymed that I preferred in my edition to retain the vulgate marked with an *obelus*. Mr. Ellis now suggests

Qua notat Argynni poena, Mimantis aquae,
and also, but with less confidence,

Qua notat Argynni poena Mimantis aquas.

But his translation is certainly somewhat forced, "shores signalized by the punishment of Argynnis, the waters of Mimas that drowned him." *Mimantis aquae*, he says, is a nominative in apposition with *poena*. As for the locality, he admits that in the ordinary mythology it was placed in Boeotia, on the banks of the Cephissus. But, as the poet mentions the Carpathian sea as the scene of the wreck by which Paetus was drowned, he supposes him to have transferred it to the coast of Asia Minor, and he rather ingeniously suggests that the islands Argennusae may record the story of Argynnis as a local legend. (More probably, I should say, the word is a corruption of *ἀργυρόστοι*, "white islands.") Here however is the stormy headland Mimas; and Mr. Ellis cites Thuc. viii. 34 in proof of its known danger.

It may be doubted if Propertius is rightly called "a learned man" (p. 24). He was so only in the sense that he was a pedant in Greek learning. His ignorance of geography is very often shown; and like Virgil's knowledge of farming, he got what he knew only from books, and often mixed up different accounts in one and the same story.

The last passage discussed by Mr. Ellis is v. 51, 21.

Si te Eoa Dorozantum juvat aurea ripa,
where he rejects the easy and probable correction *Doryxenium*, as the familiar name (*ὑποκόρισμα*) of a mistress, and supposes Propertius to

have used a semi-barbarous Latin form to express Dorakta or 'Obraxta, off the coast of Carmania (Persian Gulf), and that *aurea ripa* is an attempt to express the same word. This may or may not have been the case. For my own part, I think he had heard of an *Aurea Chersonesus* in the far east, and knew neither where nor what it was. This is one of those many passages in which we cannot hope ever to get beyond vague conjecture.

These Professorial Essays are indications of real work and much energy in the cause of learning. Like the Cambridge *Journal of Philology*, the occasional publication of them affords at once scope and encouragement for scholars to put their thoughts on paper. We are beginning, we may hope, if late, yet not wholly without effect, to follow the example so long set us by the Germans.

F. A. PALEY.

Intelligence.

Mr. George Smith has just discovered the fragments of an Ancient Assyrian Canon, from the Babylonian copy of which the much-contested Canon of Berosus was unquestionably derived. The importance of this relic to Chronologists can scarcely be over-estimated, and it will form the substance of a paper shortly to be read before the Society of Biblical Archaeology by its fortunate discoverer.

The Congress of German Philologists, which was to have taken place at the end of September in Innsbruck, has been postponed till next year on account of the cholera.

Dr. Beke's projected expedition for the verification of the true Mount Sinai, says the *Athenaeum*, is now assuming a practical form. Several gentlemen have kindly promised contributions, provided the whole amount required, estimated at £500, be forthcoming. It will be remembered that Dr. Beke is of opinion that "the Mount of God in Horeb" is not anywhere within the peninsula between the Gulfs of Suez and Akaba, but in the Arabian desert east of the head of the latter gulf. His views are more fully developed in a recently published pamphlet, *Mount Sinai a Volcano*.

We have received part i. of Mr. Dunbar Heath's new work *Phoenician Inscriptions* (Quaritch). It is difficult to treat such an eccentric publication seriously. Mr. Heath has a strong antipathy to the square Hebrew character, and the practice of writing it from right to left, which constitutes, in his opinion, "an immense bar to the popularisation of Semitic research." As if, forsooth, "Semitic research" needed to be "popularised." He has also several new, or partly-new, theories to ventilate touching the origin of Christian ideas, which we need not inflict upon the reader, as they are based for the most part on a philology of the wildest description. For a specimen of the latter, take the "obvious," "or at least probable" derivation of "Ashter or Gashteret from a common root with *yarət*, uterus, *borēpa*, &c." The inscriptions (among which the Moabitish of Mesha is included) are well known with the exception of four "devoted inscriptions" derived from the so-called "Moabite pottery," the genuineness of which is, to say the least, extremely problematical. They are all printed on Mr. Heath's new plan—from left to right.

Society of Heb. Literature.—The first publication issued under the auspices of this Society is entitled a *Miscellany of Hebrew Literature*, and contains, a specimen of the Biur on Genesis (Benisch); specimens of the book Cusari (*Neubauer*); Zunz on the sufferings of the Jews in the Middle Ages (A. Löwy); Letter of Maimonides to Rabbi Jehudah Ibn Tibbon (*Adler*); Chisdai the son of Isaac, translated from the German by A. J. K. D. under the direction of Dr. S. Davidson; &c., &c. The subject-matter of the extracts is interesting as far as it goes, but there is a fragmentariness about the publication which is only justifiable in an introductory specimen-volume like the present. It is to be hoped that in future the Society will give their attention to complete works, such as their *Commentary on Isaiah*, which will be reviewed shortly in the *Academy*. It may be remarked in passing that the *Miscellany* shews occasional signs of haste: *Chamdu lillahi* is written (p. 7) without el; there are some slight misprints in the Arabic of pp. 64-7; for "single chapter" (p. 70) read *verse*; the rendering at the commencement of p. 53 is inaccurate and contradictory; on p. 57 we read, that "the giving of the names rested upon the distinction between the species, which differ from each other like seals (each bearing a different engraving), as explained before," where we should read simply that the giving of names is a "separation of species and distinction of their powers." Is it implied (p. 26) that the saying: "From Moses to Moses, &c." refers primarily to Mendelsohn?

But, not to enlarge upon details, we may say generally that the work will prove a useful addition to the student's library, and is well suited as an introduction to the more solid works which, it is to be hoped, will speedily follow.

Contents of the Journals.

Zeitsch. d. deutschen morgenl. Gesellschaft, vol. xxvii. Nos. 1 and 2.—On the Paddhati of Cārgadhara; by T. Aufrecht.—Excursions into the region of the history of chess; by K. Himly.—Seventh

Athenian Phoenician inscription; by J. Gildemeister.—On forgeries of inscriptions; by A. Socin; with postscript by K. Schlottmann.—The shrine-bearing statue of Harual; by G. Ebers.—Explanation of Venedidat i.; by E. Sachau.—Massorah among the Syrians; Some recent discoveries in Syriac literature; and The grammatical book *Sebil Tabb*; by A. Geiger.—From letters of Dr. Socin and Dr. Goldgieber to Prof. Fleischer.—Further notes on the dual in Hebrew; by G. M. Redlob.—Reviews of Strack's *Prolegomena critica* (Dillmann); Abbeloos' and Lamy's *Babhebrai Chronicon* (Zingerle); *The Pandit* (Weber); Wright's *Catalogue of Syriac MSS.*, part iii (Nöldeke); Abu'l-Walid's *Book of Hebrew roots*, fasc. I (Geiger); al-Maqqari's *Book of the shining torch* (Mehren); Baer's *Liber Tisaias* (Mühlau); Tiesenhausen's *Coins of the Oriental Caliphates* (Blau); Haug's and West's *Book of Arda Viraj* (Hübschmann).

New Publications.

- CORPUS inscriptionum latinarum. Vol. vii. *Inscriptiones Britanniae latinae*, ed. A. Hübler. Berlin: Reimer.
 CREUSAT, J. B. Essai de dictionnaire français-kabyle (zouaoua), précédé des éléments de cette langue. Alger: Jourdan.
 HAGIOGRAPHA chaldaice. Ed. P. de Lagarde. Leipzig: Teubner.
 HELTEN, W. L. VAN. Ueber die Wurzel *tu* im Germanischen. Leipzig: Richter und Harrassowitz.
 JACÖT. Geograph. Wörterbuch aus d. Hdndchrn. auf Kosten der d. morg. Ges. hrsg. v. Ferd. Wüstenfeld. 5 Fd. Annkngn. Leipzig: Brockhaus, in Comm.
 JELLINEK, A. Bet ha-Midrasch. Sammlung aus der ältesten jüdischen Literatur. 5 Thl. Wien: Winter.
 OGLERIUS, B. de T. Opera quae supersunt ad orthographiam Ms. codicis bibl. regii taurinensis athenaei nunc primum descripta ac notis declarata, cura et studio J. B. Adrianii cum proemio J. Raviola. Augustae Taurinorum: ex officina Regia.
 PAUTHIER, G. Le livre classique des trois caractères de Wang Pén-Héon en chinois et en français. Paris: Challamel aîné.
 SALLMANN, C. Die deutsche Mundart in Estland. Cassel: Kay.
 STEIGER, K. Die verschiedenen Gestaltungen der Siegfriedsage in der germanischen Literatur. Hersfeld: Höhl.
 STUDIEN zur griechischen u. lateinischen Grammatik. Hrsg. v. G. Curtius. 6 Bd. 1 Hft. Leipzig: Hirzel.
 TARGUM, das samaritan. zum Pentateuch. Zum erstenmale in hebr. Quadratschrift, nebst einem Anhange textkrit. Inhaltes, hrsg. v. Dr. A. Brüll. 1 Thl. Genesis.

THE ACADEMY.

"INTER SILVAS ACADEMI QUÆRERE VERUM."

Vol. IV.—No. 81.

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